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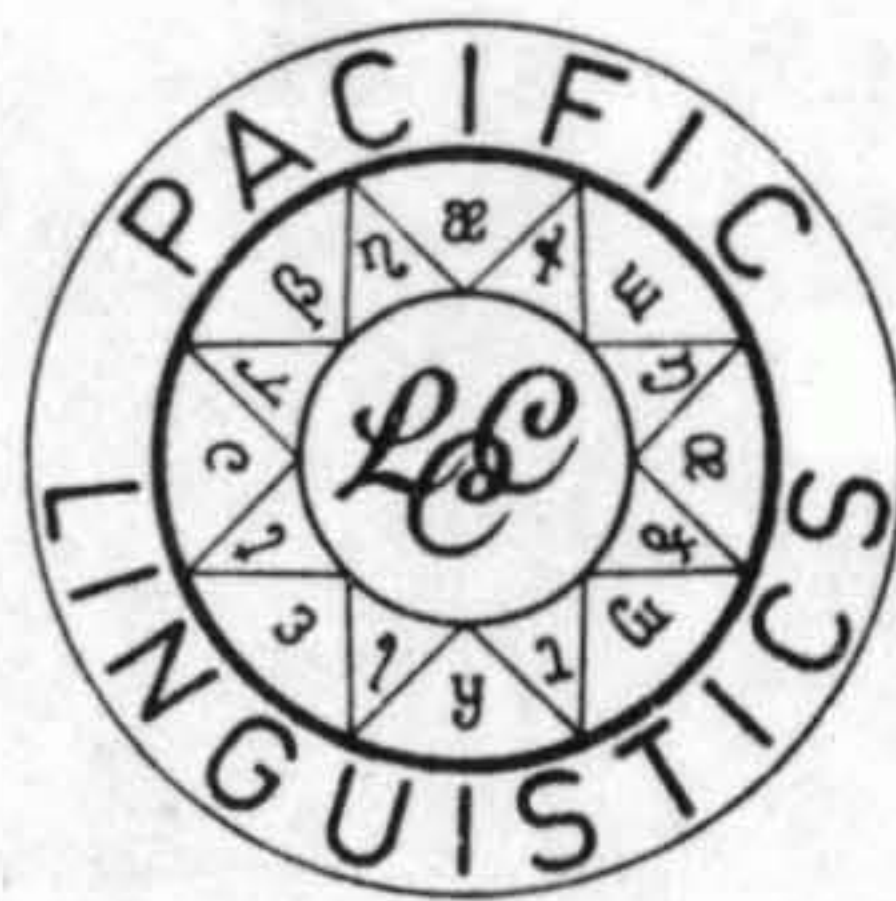
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TABLE OF CONTENTS

	<i>Page</i>
LANGUAGES OF THE ARAMIA RIVER AREA by Ger P. Reesink	
1. INTRODUCTION	1
1.1. Acknowledgments	2
2. RELIABILITY OF TESTLISTS	2
3. ARI	7
3.1. General	7
3.2. Relationships	8
3.3. Notes on Phonology and Grammar	9
3.4. Conclusion	10
4. BAINAPI	11
4.1. General	11
4.2. Relationships	11
4.3. Notes on Phonology and Grammar	13
5. KAMULA	13
5.1. General	13
5.2. Relationships	14
5.3. Notes on Phonology and Grammar	17
6. TAO-SUAMATO	18
6.1. General	18
6.2. Relationships	18
6.3. Notes on Phonology and Grammar	21
7. WAIA	21
7.1. General	21
7.2. Relationships	22
7.3. Notes on Phonology	25
7.4. Conclusion	25

8. CONCLUSION	26
<i>Notes</i>	28
Appendix A	30
Appendix B	31
<i>Bibliography</i>	35
Map	37
A DIALECT SURVEY OF EASTERN TRANS-FLY LANGUAGES by Lillian Fleischmann and Sinikka Turpeinen	
1. INTRODUCTION	39
2. OVERVIEW OF THE AREA	40
3. DETAILS ON THE BINE LANGUAGE	41
4. DETAILS ON THE GIZRA LANGUAGE	43
5. DETAILS ON THE GIDRA LANGUAGE	44
6. PHONOLOGICAL COMPARISONS	45
6.1. Bine	45
6.2. Gidra	48
7. CONCLUSIONS	49
Appendix A	50
Appendix B	60
Appendix C	63
<i>Bibliography</i>	75
Map	76
BANONI, PIVA, AND PAPUANIZATION by Peter C. Lincoln	
<i>Acknowledgments</i>	77
0.1. Introduction	77
0.2. Definitions	78
0.3. Orthography	78
1.0. LEXICAL COMPARISON OF BASIC VOCABULARY	79
1.1. Shared Words	80
1.2. Extent of Influence	87
2.0. GRAMMATICAL COMPARISON	87
2.1. Sketch of Banoni Aspect	87
2.2. Notes on Aspect in Piva	88
2.3. Rotokas Verb Sketch (from VRPE)	89
2.4. Conclusion	89
2.5. Comparison of Word Order	89

3.0.	TEXTUAL COMPARISON OF BANONI AND PIVA	90
3.1.	The Text	90
3.2.	Textual Comparison of Syntax	94
3.3.	Further Lexical Comparison	95
3.4.	Glossary of Text with Rotokas Equivalents	95
3.5.	Extent of Influence in Narrative Vocabulary	97
3.6.	Conclusion	97
4.0.	DISCUSSION	97
4.1.	A Case of Papuanization	97
4.2.	Conclusion	98
4.3.	Dual-lingualism and Papuanization	99
5.0.	APPENDIX: LEXICOSTATISTICS OF BANONI AND PIVA LISTS	99
	<i>Notes added in proof</i>	101
	<i>Notes</i>	102
	<i>Bibliography</i>	103

LANGUAGES OF THE ARAMIA RIVER AREA

GER P. REESINK

1. INTRODUCTION

The Aramia River runs about twenty miles north of the East-West part of the Lower Fly River in the Western District of Papua New Guinea (see map). There are six languages in the Aramia River area of which Gogodala is the dominant language, spoken by approximately 5000 people. The earliest information on this language was provided by Riley and Ray (1930-1). The New Testament has almost completely been translated into this language by the Asia Pacific Christian Mission (APCM).

Very little was known about other languages in the area, until Franklin (1973:14, 165, 270, 256) provided some information about languages that are called Bainapi, Tao-Suamato, and Waia. This, however, was not intended to give full information about the linguistic picture of this particular area. For example, no exact location was known for Bainapi, nor was the location of Tao-Suamato known to include the Aramia area.

The title "Languages of the Aramia River Area" is not meant to suggest a close relationship between these languages. There is, on the contrary, such a wide diversity that no two of these languages exhibit a Stock-level relationship, if one wants to hold to the percentage values proposed by Swadesh and adapted by Wurm (1971:542)¹ for Papua New Guinea.

The names that are used for the languages in this area may not be the most appropriate, however, in order not to add to the abundance of language names in this country, and the confusion this often causes, they will be used in this article.

The languages will be described in the order one meets them following the Aramia River downstream: Ari, Bainapi, Kamula, Tao-Suamato, and Waia (see map).

1.1. ACKNOWLEDGMENTS

Although maps and other information indicated that north of the Aramia River the area was uninhabited, it was felt that a closer investigation of the area was justified.

The data for this report was collected during a short survey in August 1974. This survey was made possible by a grant from the Papua New Guinea Research Fund of the Summer Institute of Linguistics (SIL). The use of the helicopter provided by SIL's aviation department made it possible that even in a short time a number of villages in the swampy area could be visited.

Many thanks are also due to Mr and Mrs Briggs at Awaba, Mr and Mrs Marx at Balimo, Mr and Mrs Partridge at Mapoda, all of the Asia Pacific Christian Mission and Mr and Mrs Bailey at Kawito of the Missionary Aviation Fellowship (MAF) for their much appreciated hospitality and help in locating the languages of the area.

I am indebted to Dr K. J. Franklin for full use of raw data collected on the Gulf survey and for helpful comments on this paper.

2. RELIABILITY OF TESTLISTS

At Mapoda when taking wordlists of the languages of the lower Aramia River, a man called Nulia was informant for what is now known as the Waia language. This was probably the same informant as Franklin had when he did his survey in 1970. This offered a — probably — unique opportunity to check two wordlists of the same language.

When we compare the 100 wordlist of Appendix J.7 (Franklin 1973: 592) with the list obtained on this survey the following differences are noted:

CHART 1

DIFFERENCES BETWEEN TWO WORDLISTS FOR WAIA

	K.F. 1973	G.R. 1974
* 3. <i>I</i>	na	baidi
* 5. <i>we</i>	ahidio	lenetewa
*14. <i>neck</i>	kokobe	abau
26. <i>liver</i>	—	ařa
29. <i>star</i>	moroki	oloki
*34. <i>ground</i>	hopu	aka
*36. <i>sand</i>	totata	pohorũ
*37. <i>mountain</i>	haka hunu-hunu	po:do
40. <i>ashes</i>	—	tuwi
44. <i>bark</i>	—	tama (= skin)

(Chart 1 continued)	K.F. 1973	G.R. 1974
*48. <i>feather</i>	patamu	kieʃi
51. <i>big</i>	ola	—
52. <i>small</i>	dehapoto	—
*53. <i>good</i>	wadiala	hidola (= <i>straight</i>)
*56. <i>white</i>	inikaka	keakeala
59. <i>green</i>	—	gyedola
62. <i>full</i>	—	etabu
63. <i>new</i>	—	uli
*66. <i>stand</i>	nemahiga	nute
*67. <i>sit</i>	nemedz	neʃata
*68. <i>speak</i>	negaiya	negwita
*69. <i>walk</i>	nepate	netona
*73. <i>see</i>	haba	nu:mito
77. <i>flies</i>	—	epuida
78. <i>bite</i>	—	tea:lo
*81. <i>who</i>	poteræka	poko
*82. <i>what</i>	badalakie	badame
83. <i>burn</i>	—	eiwe
*86. <i>this</i>	mohela	mwe
*87. <i>that</i>	moʔola	beʔela
90. <i>knows</i>	—	ṇayɛtawara
91. <i>kills</i>	—	galimiha
92. <i>not</i>	—	akatoale
96. <i>clan</i>	—	pi:tu
98. <i>seed</i>	kikipo	kihakikipo
99. <i>round</i>	—	mokopi
100. <i>dies</i>	nəhuiʔta	ehwe

Note: Pairs marked with * are completely different.²

In sixteen instances one of the lists of Chart 1 has blanks where the other has glosses. Of the remaining instances, at least nineteen yielded completely different responses from the same informant (see Footnote 2).

This comparison of course cannot demonstrate which list is more reliable. This would be impossible on the basis of two lists. It does, however, demonstrate that probably around 20% of a first word-list in a language may be unreliable. If this discrepancy is uniform it probably would not affect tentative classifications computed on the basis of these lists. But it is impossible to know whether there is a constant error that would not affect statistical figures. It seems more likely that classifications on the basis of first material

are affected by such a degree of unreliability. It would mean that languages compared could easily be more closely related than at first suspected (see also Franklin 1973:21).

There are two additional languages with wordlists which could be compared with Franklin's material: Bainapi and Tao-Suamato. For Bainapi only the fifty words listed by Franklin (1973:559) could be compared, with seven pairs, or 14.3% as real differences (see Chart 2).

CHART 2

DIFFERENCES BETWEEN TWO WORDLISTS FOR BAINAPI

	K.F. 1973	G.R. 1974
6. <i>all</i>	iniguto	(nini)gutute/otomate
* 7. <i>head</i>	dagata	bisikoki/dapukala
*14. <i>neck</i>	akaro	timoku
17. <i>breast</i>	burukopa	bu
*23. <i>fat</i>	kinikiniau	sai
*26. <i>liver</i>	sukuno	komsai/paliki/kupui
*27. <i>sun</i>	nane	male
30. <i>cloud</i>	—	paupa/do
31. <i>rain</i>	daiegisiu	daiagisoro
32. <i>night</i>	dapo	dapo/tupitiau
*36. <i>sand</i>	siapuri	(m)okase
38. <i>fire</i>	darau	darau/betate
*39. <i>smoke</i>	suara	do
43. <i>root</i>	kesei	kase/bosababa/eposau

The right column in Chart 2 gives various alternatives due to the fact that five or six complete lists were recorded. This means that where there is only one word this was given independently in six different instances which seems to prove the reliability. In other cases it is still impossible to tell which one or two words really mean the same thing as the English gloss, e.g. for *liver*.

In the case of *fire* the word *darau* was obtained in a few lists and *betate* only once, which, with additional support from Franklin's list seems to prove that *darau* is the more common word.

The words for *rain* are apparently compounds, meaning something like *water* (*daia*) *falls*, *is falling* (*gisi-*).

Turning now to the data for Tao-Suamato there are roughly the same percentages of differences between the two lists, i.e. at least 17% is completely different.

CHART 3

DIFFERENCES BETWEEN TWO WORDLISTS FOR TAO-SUAMATO

	K.F. 1973	G.R. 1974
3. <i>I</i>	no	no bita (Par.)
6. <i>all</i>	ami bato ² oumi	bedele batomi (Par.)
*14. <i>neck</i>	ba po ² ole	tumu ² u
*16. <i>arm</i>	posi ² i	pipini
*19. <i>leg</i>	boho	idi ² i
21. <i>skin</i>	aipele	aipele gigi (Par.)
*23. <i>fat</i>	bedeni ² ofi	gomi gadi (Par.)
*25. <i>heart</i>	bita	mu ² i sosolo (Par.)
26. <i>liver</i>	—	ivo
27. <i>sun</i>	sei ² i	sei/bubei naumu (Par.)
28. <i>moon</i>	bubei	siwo bubei (Par.)
*30. <i>cloud</i>	diadia ² la	aleta ofuto (Par.)
31. <i>rain</i>	goloi/gozoi	godoi/daleho goloi (Par.)
*36. <i>sand</i>	gipoi	so ² oboi giri (Par.)
37. <i>mountain</i>	afia hakapu	kakabu
*40. <i>ashes</i>	mowimu ² i	gutale
43. <i>root</i>	me ² ele	upoli me ² ele (Par.)
*44. <i>bark</i>	a: ² o	aipele i ² a (Par.)
*51. <i>big</i>	bede	golioliwo (= long)
52. <i>small</i>	goisi ² e	—
*57. <i>black</i>	omeometo	botcho
*64. <i>eat</i>	lozo/lolo	moze danimi (Par.)
66. <i>stand</i>	be ² au ² i ² opo	uilowo
67. <i>sit</i>	bebaleho	balehe/momi baleho (Par.)
71. <i>sleep</i>	betelo	betelo moteia (Par.)
73. <i>see</i>	be aito	mo ² ote ma ² anote (Par.)

(Chart 3 continued)	K.F. 1973	G.R. 1974
74. <i>hear</i>	bewo	bewo mauwe (Par.)
*80. <i>dry</i>	bibirehale	etaupata patea (Par.)
81. <i>who</i>	vetai iřo	— woteiřo
83. <i>burn</i>	—	bigoi ladeha (Par.)
*86. <i>this</i>	apewovavo	wobo eti (Par.)
*98. <i>seed</i>	demomo'o	bomode
*100. <i>dies</i>	detakamame	mo'aha etu'aha (Par.)

Note: Par. means Parieme, the other words were collected from people from Ugu village.

McElhanon (1971:141) says that "the semantic domains of possible equivalents in New Guinea languages to items in the basic test list need to be delineated so as to attain accuracy and equivalence in filling the test list". It is hard to disagree with such a statement, yet in — almost — monolingual situations the semantic domains are impossible to be controlled.³

In our case here it helps of course when the majority of lists agree against a certain alternative, but still one cannot be sure of the exact meaning. For example, what is the word for *sun* in Tao-Suamato: sei, bubei, or naumu? Could it be that all alternative words are correct? If so, what are the shades of meaning, or do we have cases of real synonymy? This latter possibility is believed to be non-existent by many linguists (see for example Lyons 1969:447). However, word taboo could have contributed to real synonymy in this case.

Only a more extensive study of the language in question can answer questions about the exact meaning of words.

Now the question is how preliminary language classifications are affected by this amount of unreliability? Franklin (1973:270) gives a 39% relationship (on the basis of 75 words of the Swadesh 100 word-list) for Minanibai and Tao-Suamato. On the basis of the present data a percentage of at least 46%, if not 54%, or even higher is calculated (see further 6.2 Tao-Suamato, Relationships).

The figure of 54% cognates is on the basis of the first half of the Swadesh list (see for order footnote 1). 46% is on the basis of the whole list, i.e. 92 because for eight words no equivalents were recorded.

According to Voorhoeve (1970a:1257) Swadesh's 100-list has a slightly higher retention rate than his 200-item list. Would this statement also hold for the first and second half of this 100-item list? Could this explain the drop from 54% to 46% cognates between Minanibai and Tao-Suamato?

This might be true, but there is another factor which may be as important. When comparing the various wordlists obtained for a particular language, it seemed that verbs showed more variation from one list to the other than other words. Nouns seemed to be more reliable items. Since the first half of the present list contains almost exclusively nouns and the second one quite a few verbs, the differences between lists were calculated for both halves separately. Chart 4 shows the results.

CHART 4

DIFFERENT RESPONSES ON TESTLISTS FOR WAIA, BAINAPI, TAO-SUAMATO

(Franklin 1973, and present study)

	Waia	Bainapi	Tao-Suamato
real differences items 1-50	17%	14.3%	22.2%
items 50-100	29%	—	34.4%

The figures of Chart 4 seem to suggest that the second half of the list is less reliable. If the first half of the list for Tao-Suamato increased the cognation percentage, it is not too unreasonable to expect that the second half, if reliably obtained, would do the same. The assumption that new insights can only enhance a cognation percentage seems therefore valid.⁴ Such an assumption underlies Franklin's statement "that Bainapi and Kaluli show at least a 16% relationship" (1973:165), which was calculated on the basis of the first 50 words. A calculation based on a full list substantiates this assumption (see discussion under 4.2 Bainapi, Relationships).

3. ARI

3.1. GENERAL

This language is spoken in Ari village on Ari creek which runs into the Aramia River, west from its junction with the Soari River. Ari village is apparently bilingual; there are a number of Gogodala

speakers and all Ari speakers have Gogodala as their second language. It would not be surprising to find that this same language is also spoken at Serea, a new village on the Aramia River, south of Makapa. There are approximately 80 to 100 Ari speakers.

3.2. RELATIONSHIPS

The materials recorded do not suggest that Ari is a dialect of Gogodala in that the percentage of possible cognates (34 words out of 87 comparable words of Swadesh 100 item list or 39%) is very low. It is very likely that even the figure of 39% denotes loan words rather than genuine cognates, as there are hardly any regular sound correspondences between the two lists. Nineteen words are exactly the same for Ari and Gogodala.

CHART 5

ARI AND GOGODALA: LOAN WORDS AND COGNATES

English	Ari	Gogodala
1. <i>man</i>	dalagi	dalagi
2. <i>woman</i>	atogi	susegi
3. <i>I</i>	ne	ne
4. <i>you</i>	e	e
5. <i>we</i>	se	se
6. <i>all</i>	welabega	welabega
7. <i>head</i>	gabi	ganabi
8. <i>hair</i>	ti:ta	ti:ta
9. <i>eye</i>	tokodaba	tao
12. <i>tooth</i>	po:so	po:sə
13. <i>tongue</i>	menəpila	melepila
17. <i>breast</i>	omo	omo
20. <i>knee</i>	misikawa	asimisi
21. <i>skin</i>	kaka	kaka
22. <i>blood</i>	dede	didid
25. <i>heart</i>	aʔipo	alibu
27. <i>sun</i>	gadepa	gadepa
32. <i>night</i>	i:sa	isa
41. <i>path</i>	nape	nabidi
42. <i>tree</i>	yei	i:
43. <i>root</i>	sasa	sasa
45. <i>dog</i>	sokε	sokε
62. <i>full</i>	agutawa	taubega
63. <i>new</i>	kanikε	kanikε

(Chart 5 continued)

	English	Ari	Gogodala
64.	<i>eat</i>	na-	na-
65.	<i>drink</i>	ni-	ni-
70.	<i>give</i>	-ata-	-ata-
71.	<i>sleep</i>	tenelo	tenelo
74.	<i>hear</i>	enomane	enama-
76.	<i>come</i>	pɛle	pɛ
81.	<i>who</i>	ɛpoate	poate
84.	<i>louse</i>	ikami	ami
89.	<i>two</i>	saki	saki
90.	<i>knows</i>	itawa	itawa

On the basis of the other fifteen words from Chart 5 the following sound changes may be suggested: ARI -p- = GOG -b- : ARI aʔipo → GOG alibu *heart*, and ARI nape → GOG nabidi *path*

Ari vowels seem to be lower than in Gogodala in a few cases: aʔipo → alibu *heart*; yei → i: *tree*; dede → didi *blood*.

In some cases Ari has reduced forms: ARI gabi → GOG ganabi *head*; nape → nabidi *path*. But in other instances the reverse seems to be the case: ARI tokodaba → GOG tao *eye*; ikami → ami *louse*.

Comparison of the Ari list with a Suki list⁵ (91 of the Swadesh 100-item list were compared) resulted in a probable cognate percentage of 11%. It could well be that Ari can be identified with Waruna, which Wurm (1971:576) lists as a second member of the Gogodala family. Comparing the Ari list with the Waruna material Riley and Ray (1930-31) provided showed about 50% exactly the same words. (74 word pairs were compared, all belonging to Swadesh 100 wordlist.)

Apart from the listed relationship with Gogodala and Suki and the possible identification with Waruna, no other relationships could be established. That is, a few possible cognates with Zimakani (data in Voorhoeve 1970b) would allow only a Phylum level relationship with this language, which is not surprising in that McElhanon and Voorhoeve (1970) have brought all the languages of the Western District and many more together in a Phylum. Also a few possible cognates have been noted with Proto-Awyu (Healey 1970), such as ogo *water*, mboige *bone*, ndogu *nose*, and perhaps others.

3.3. NOTES ON PHONOLOGY AND GRAMMAR

Very tentatively the following set of phonemes may be noted for Ari consonants: p, t, k, b, d, g, mb, nd, ŋg, m, n, s, r, w, and y. Vowels: i, e, a, o, u.

There are not many differences with the phoneme inventory that Voorhoeve (1970a:1248) gives for Gogodala, nor with Suki. Note however the possible phonemic status of prenasalized voiced plosives which points in the direction of Lake Murray languages (see Voorhoeve 1970b).

Ari has in addition two semi-vowels as consonants. However, this would also be the case for Gogodala as far as can be determined from the present data. The phonemic status of the vowels is less certain. It could well be that *e* and *o* have to be differentiated in *e* and *ɛ*, and *o* and *ɔ* respectively. The morphological and syntactic features seem to be very much like Gogodala as far as can be seen on the basis of small data, though there are also differences.

3.4. CONCLUSION

At Suki, Mr. G. Martin (APCM) informed the author that the Suki people used to be feared headhunters who almost eliminated a whole tribe opposite from them on the other bank of the Fly River. Finally, the one village of their enemies that was left moved to the north to the Aramia River. It does not seem unreasonable to assume that these people are the same as the Waruna or Ari speakers.

Ari could be a separate language of the same family as Gogodala which has adopted a lot of loanwords from its dominant neighbour. If this is true it is, however, strange that not more cultural items are shared, see Chart 6..

CHART 6

CULTURAL ITEMS IN ARI, WARUNA*, AND GOGODALA

	Ari	Waruna	Gogodala
<i>garden</i>	gobandaba	guam	egada
<i>banana</i>	ndubali	gwas i	dubali
<i>sugar cane</i>	katima	midi	ai
<i>sweet potato</i>	totobe	totobe	koni/tokobowisa*
<i>taro</i>	bibi	bibi	bibi
<i>yam</i>	inuli/malebe	samo	masaga* waisa

*Riley and Ray (1930-1).

4. BAINAPI

4.1. GENERAL

This language is spoken in three villages. In each village the people refer to their language with a different name. At Makapa it is called Turumasa, at Pikiwa Bainapi, and at Bamustu (on Uladu lagoon) it is Dibiasu. There are approximately 400 speakers.

A language Dibiasu, located in the Upper Bamu or Wawoi River area, is listed by Klieneberger (1957:35), who refers to a wordlist by Rentoul (Annual Report 1924-5). Franklin (1973:276) considered Dibiasu as probably in the Inland Gulf Family of languages, but was unsure due to the few words listed in the Annual Report.

The name Bainapi was given by the author's informant as his clan name. Other language names may also be clan names. The location of this language in the Upper Wawoi River in 1925 is compatible with a history note received from Mr. F. Ch. Horne (APCM). According to him the people who live at Pikiwa (and by inclusion Makapa and Bamustu) lived somewhere between the Soari and Wawoi Rivers before they came out of the interior in 1941. (This time reference was also used by the informant at Bamustu, Takabia.)

4.2. RELATIONSHIPS

Identification of Dibiasu with Bainapi renders the statement that Dibiasu would be a member of the Kikori River Family (Wurm 1971:648) as invalid since the only substantial relationship that has been found for Bainapi is with Kaluli, a member of the Bosavi Family.

According to Franklin (1973:165) Kaluli and Bainapi show at least a 16% relationship. His judgment was based on only 50 words for Bainapi. A comparison between data collected on this survey and data provided by Franklin allowed only 58 words to be compared. However, this alone increased the cognate percentage. The percentage of cognates between Bainapi and Kaluli is at least 31% (possibly 38%, see Chart 7), which would bring the languages into a family-level relationship.

A quick inspection of the interphylic data McElhanon and Voorhoeve (1970) provided shows that Bainapi can be included in the Central and South New Guinea phylum. This is not surprising since Kaluli (= Bosavi in McElhanon and Voorhoeve) already belongs to it. A Phylum level relationship also exists with Kamula (7% probably) but not with Tao-Suamato (not more than 3% on the basis of the present data, a 190 wordlist, and that figure reflects loanwords rather than genuine cognates).

CHART 7

POSSIBLE COGNATES BETWEEN BAINAPI AND KALULI

	Kaluli	Bainapi		
1. <i>man</i>	kalu	sau	sau	= word for <i>male</i> ?
<i>young boy</i>	so:wa			
<i>child*</i>	sawaisia	sausia	sia	= <i>small/young</i>
3. <i>I</i>	ne	nan		
7. <i>head</i>	mesaki	bisikoki	ki	= <i>bone</i>
		dapokala	mes/bis	= <i>skull? bone?</i>
9. <i>eye</i>	si	usa	us	= <i>eggform/eyeball</i>
<i>egg</i>	us			
12. <i>tooth</i>	bes	bes (e)repa	repa	remains unaccounted for
<i>chin</i>	kade	kayuki		doubtful
17. <i>breast</i>	bo	bu		
18. <i>belly</i>	kuf	kupa	KAL f in BAI p	
24. <i>bone</i>	ki	ki		
39. <i>smoke</i>	dufun	dupu		
34. <i>ground</i>	hen	?e	(?)	
35. <i>stone</i>	u	ko	(?)	
<i>sweet potato</i>	siabulu	siapři		
66. <i>stand up</i>	dasi(lima)	dasi-o		
67. <i>sit down</i>	masea	eso		
70. <i>give me</i>	mini/dimina	mina-pe		
72. <i>lie on ground</i>	ali (ma)	usiati	(?)	
73. <i>see</i>	bo:ba	bo-so		
76. <i>come</i>	mena	mini		
84. <i>louse</i>	fe	pe		
89. <i>two</i>	adeb	ařapa		

*The unnumbered items are not included in the Swadesh 100 wordlist but are obtained by the standard SIL list as well as by Wurm's list (see Laycock 1970).

Chart 8 gives a few possible loanwords from Gogodala, all of which are cultural items, adapted quite recently since Bainapi speakers only came in contact with Gogodala after 1941. Their word for *sweet potato* siapři though is shared with Kaluli and other languages of the Bosavi and East Strickland Families (see Dutton 1973:439).

By comparing the Bainapi word for *banana* masei we note that this is shared with Foe. It can be postulated that Bainapi originally came from the Lake Kutubu area, but have moved a little further than their Family and Stock members who stayed in the Mt. Bosavi area, adopting Shaw's hypothesis (1973:197).⁷

CHART 8

	Bainapi	Gogodala
1. <i>wallaby</i>	kaupa	gauba
2. <i>taro</i>	bibi	bibi
3. <i>sugar cane</i>	ai	ae
4. <i>yam</i>	wisa	waisa
5. <i>axe</i>	kabi	kabi

The Bainapi stayed probably in the vast jungle area between the Soari and Wawoi rivers before they finally moved south towards the Aramia River and entered into marriage relationships with the Gogodala speakers.

4.3. NOTES ON PHONOLOGY AND GRAMMAR

The twelve consonant phonemes seem to be p, t, k, b, d, g, m, n, s, ʃ, w, and y. Bainapi has probably seven vowel phonemes: i, e, ε, a, ɔ, o, and u.

The following vowel sequences have been observed: ei, ai, ia, ea, ae, au, ua, and ou. It is well possible that in all instances of Vu or uV the u has to be interpreted as w. The ə is restricted to the environment C-C on syllable boundaries and therefore is probably only a transition feature. Vowels seem to be lengthened when they occur in stressed syllables, stress being probably phonemic.

Additional data is necessary before the meaning of various suffixes of the verb stem can be analyzed with certainty.

The order of grammatical slots seems to be:

Vb stem + Time ± Neg ± Object number ± Aspect (or speaker orientation)

The basic order in a simple sentence seems to be:

Agent ± Time ± Object ± Benefactive + Predicate

If the Time is indicated by a clause, then it precedes the rest of the sentence, including the Agent (or other functioning subject).

5. KAMULA

5.1. GENERAL

Kamula is spoken in at least two villages by a total of approximately 200 speakers: Keseki, which is located near the Wawoi Falls, and Wasapea about 70 miles to the south on a lagoon north of the Aramia River. Informants in Keseki referred to a third village Sokolonepi, not far from Keseki. There are no dialectal differences between Keseki and Wasapea. People at Keseki say they came from the bush not

long ago and point south; people at Wasapea say the same and point north. In the middle is the vast jungle area which is believed to be uninhabited. It is in this area that Capell (1962, Map X; 1969, Map 13, Appendix I) located a language Kamura. Unfortunately he gives no information about it.

5.2. RELATIONSHIPS

Kamula shares about 8% possible cognates with its neighbouring language Bainapi.

CHART 9

POSSIBLE COGNATES BAINAPI — KAMULA: 14/170 = 8%

	Bainapi	Kamula
1. <i>nose</i>	deimu	mu
2. <i>tongue</i>	meteta	te
3. <i>neck (nape)</i>	timoku	tumuku
4. <i>back</i>	butaku	ko
5. <i>flesh</i>	umoko	mo
6. <i>wallaby</i>	kaupa	kapia
7. <i>fire</i>	dařau	dřaba
8. <i>taro</i>	bibi	bibi
9. <i>sweet potato</i>	siapri	siabřu
10. <i>axe</i>	kabi	kabi
11. <i>I</i>	nane	ne
12. <i>we</i>	nini	diæ
13. <i>this</i>	aye	ye
14. <i>yes</i>	e	yo

Especially the cultural items are most likely recent loans, reflecting their recent move into the Aramia River area. But also the group that lives quite far from this area near the Wawoi falls uses the same words, which would suggest that the borrowing must have preceded the split of both groups. Otherwise it would have been reasonable to expect the northern Kamula group to have borrowed from adjacent languages, such as Kasua or other Bosavian languages. The Kasua data gives the following words for food items:

<i>sweet potato</i>	siaburu
<i>taro</i>	kobaeri
<i>banana</i>	toro
<i>garden</i>	arekeno

which neither affirm nor contradict the expectation (Kamula: *siapru*, *bibi*, *tuma*, and *daliwana* respectively).

The relationship with Kaluli is about the same as with Bainapi, 5%. There is hardly if any substantial material that is shared by Tao-Suamato, another neighbouring language.

Efforts to relate this unknown language to languages of the Lake Murray area (see Voorhoeve 1970b) or languages to the north were futile. Comparing Kamula material with the 53 items McElhanon and Voorhoeve (1970) list in their Trans New Guinea Phylum points to the direction of languages of the Ok and Bedamini Families. But these relationships are indeed very remote. More promising seemed a comparison with Pa (Franklin 1973:590, Appendix J.4) which suggests a relationship on Stock level (see Chart 10). This language was included in the Pare-Samo-Beami-Bosavi-Family by Voorhoeve (1968) on the basis of 36% shared cognates with Samo. But more recent comparative work by Shaw (1973) puts this figure down to 12%, which leaves only a Stock level relationship with the East-Strickland Family of the Bosavian Stock. A correction, in this direction was already made in McElhanon and Voorhoeve (1970), where Pa (included in Pare) and Awin formed a separate family within the Central and South New Guinea Stock.

In spite of the fact that the list of Chart 10 contains only suspected cognates, there is some evidence for a genetic relationship. This of course can only be confirmed after more study of both languages has been carried out. If all 37 pairs are to be accepted (which is doubtful) a relationship between Pa and Kamula of about 20% could be suggested. Note items (19) and (20) which are probably elicitation errors. The informant may have understood *mother* for *brother* and then given the other term for the next word *mother*.

The establishment of regular sound changes must await more detailed study. The loss of initial velar stop in Kamula is a possible rule suggested by items (1) *eye* and (3) *man*, though not confirmed in other cases. On the other hand items (15) and (16) are conflicting evidence for a similar rule concerning alveolar stops. Kamula *-ma* seems to correspond with Pa *-mo/u:* items (1) and (2). Kamula */m/* seems to correspond with Pa */b/* in certain instances: items (8) and (10).

Though this list is not completely convincing, it does point to a relationship on a higher level than the Phylum with Pa. Therefore we could include Kamula very tentatively in a stock with the West Strickland Family represented by Pa (or Ba or Pare).

As far as the cultural items — foodstuffs — are concerned, Kamula shares *bibi taro* with Gogodala and *siapru sweet potato* with Bosavia and East Strickland Families. *siapru* was also given for *yam*. *ele*

sugarcane and *tuma banana* could not be placed in any of the various sets given by Dutton (1973).

CHART 10

POSSIBLE COGNATES BETWEEN KAMULA AND PA

(based on 170-item SIL standard list)

	Kamula	Pa
1. <i>eye</i>	inoma	ginamo
2. <i>knee</i>	ařuma	agumu
3. <i>man</i>	opřami opa (pl.)	kobo
4. <i>woman</i>	eya	weye
5. <i>fire</i>	dřaba	da
6. <i>ear</i>	molo	mowo
7. <i>tongue</i>	te	tæ:
8. <i>breast</i>	meme	be
9. <i>sun</i>	sali	gæle
10. <i>moon</i>	mama	abe
11. <i>water</i>	yu	ule
12. <i>back</i>	ko	(mala)go
13. <i>shoulder</i>	make	mage
14. <i>forehead</i>	daptala	debetere
15. <i>elbow</i>	domu	amu
16. <i>leg</i>	ete	tele
17. <i>tail</i>	tile	nakule
18. <i>name</i>	hi	hi
19. <i>his brother</i>	yebaba	aiya
20. <i>his mother</i>	yaya	aba
21. <i>pig</i>	alia	male
22. <i>fish</i>	amano	mulu
23. <i>house</i>	aya	a:
24. <i>earth</i>	tæna	to
25. <i>wind</i>	mosisi	nasi
26. <i>white</i>	kamale	kʷaʷe
27. <i>black</i>	dikeli	kwigine
28. <i>light</i>	rockamana	kabamahagare
29. <i>this</i>	ye	yome
30. <i>one</i>	hatřope	aso
31. <i>two</i>	dapiamete	yabo
32. <i>says</i>	yugama	<u>gʷao</u>
33. <i>hears</i>	<u>dařoma</u>	<u>godařa</u>
34. <i>knows</i>	yaməřamana	<u>dařa</u>

(Chart 10 continued)

	Kamula	Pa
<i>dies</i>	po-ma	<u>po</u> la
<i>lies down</i>	<u>e</u> řema	<u>æ</u> :o
<i>eats</i>	<u>damp</u> řoma	<u>de</u> go

5.3. NOTES ON PHONOLOGY AND GRAMMAR

A tentative phoneme inventory for Kamula is fourteen consonants: p, t, k, ʔ, b, d, m, n, ɸ, s, h, l, w, and y; and nine vowels: i, e, ɛ, ü, ə, a, u, o, ɔ.

Almost all vowels have been observed with nasalisation. Whether this feature is phonemic is not clear. It was more prominent in the northern village Keseki. Could this be an adaptation to surrounding languages? Note Franklin's remark that the area stretching "from the Upper Fly River over the Upper Strickland, Mt. Bosavi and Lake Kutubu areas into the area of the Teberan Family...roughly coincides with what may be called a 'nasalization belt'." (1973:151).

In some cases lengthened vowels were noted but this was probably due to an incidental heavy stress in repeating the word clearly for the investigator.

The status of the rounded, backed, front vowel /ü/ is not very clear either. There were only a few instances in the data and it may turn out to be a conditioned or free variation of /u/. The same can be said of the labial fricatives. They may be variants of the labial stops.

Kamula does not seem to have a separate dual in its free pronouns, nor in its verb system. The free pronouns can be listed as follows - with much reservation about their reliability:

	singular	plural
1	næ	diæ
2	wæ	wæ (?)
3	yæ/wæ	wæ/yæ (?)
	opřami hatřope siřetima hařoma	one man stands
	opa dapiamεte siřepobahæma	two men stand
	opa dabatřopa siřepobahæma	three men stand

The following sentences illustrate at least three tenses, for an intransitive and a transitive verb:

opřami	ta-ma		the man goes
opřami	tatřa	ta-wa	the man went yesterday
opřami	iyena	třowiyo	the man will go tomorrow
(Agent	Time	Predicate)	

opřami siapřu da-ma *the man eats the yam*
 opřami siapřu tatřa da-wa *the man ate the yam yesterday*
 opřami siapřu iy na dřowiyo *the man will eat the yam tomorrow*
 (Agent Object Time Predicate)

The negative is a verb prefix: po-.

The free pronouns seem to have Agent, Object, and Benefactive marking suffixes attached to them.

yæ-ta næ-ndra hami-ma *he gives it to me*
 he-Ag me-Ben give-Pres

In Benefactive position first and second person are not distinguished; so the sentence just cited also means *he gives it to you*.

The equivalents elicited for sentences such as *he gives it to us/you(pl.)/them* seem to confirm that Kamula does not distinguish number for 2nd and 3rd person.

6. TAO-SUAMATO

6.1. GENERAL

The language is spoken at Parieme (Sipoi) and Diwami on the Wawoi River, Kubeai and Wareho on the Guavi as stated by Franklin (1973:270) and also at Ugu on the Aramia River. This last village seems to be a rather recent settlement. If the other villages are about the size of Ugu and Parieme, the number of speakers must be around 500.

6.2. RELATIONSHIPS

In Franklin (1973) Tao-Suamato forms a family with Minanibai within the Inland-Gulf Stock. As has already been pointed out, a comparison between the wordlist for Tao-Suamato from this study and Minanibai gave a higher percentage of possible cognates. This is also the case for other languages which have been related to Tao-Suamato in the earlier study (see Chart 11).

CHART 11

COMPARISON OF COGNATE PERCENTAGES OF TAO-SUAMATO

	Minanibai (MNB)		Ipiko (IPI)		Mahigi (MAH)	
	K.F.	G.R.	K.F.	G.R.	K.F.	G.R.
Tao-Suamato (TSM) cognate percentage	39	46	14	36	38	64
number of words compared	75	92	76	91	39	64

With regard to Mahigi, this must be a separate language though closely related to Tao-Suamato as was suggested by Franklin. The striking increase of the cognate percentages involved not too many words that were exactly the same as we would have expected, if Mahigi was believed to be simply another name for Tao-Suamato. But there are enough regular sound changes between the two lists to warrant a close family level relationship.

The same can be said of Tao-Suamato and Minanibai. For the regular sound changes see the much cited recent study. A few remarks may be added here. First, in the present survey no prenasalized stops were recorded in Tao-Suamato. Second, a few additional sound changes could be established: TSM -h- = MNB -p-: *daleho* → *darepo* *rain* or MNB -p- (see Franklin 1973:272), TSM -w- = MNB -b- or -b-: *eweha* → *ebes* *bird*, and *uillowo* → *kuidobo* *stand*.

TSM -ř- = MNB -n-: *idiři* → *idini* *leg* and *nono* → *dolo* *breast* (/ř/ represents [ř] and [l]).

Similar sound changes can be found between Tao-Suamato and Ipiko (the list of possible cognates is found in Chart 12).

TSM -f- = IPI -h-: *ufilo* → *ufino* (MNB *kupino*) *eye*. This pair also illustrates TSM /ř/ → IPI and MNB /n/ which we find in other pairs as well: *wali* → *wani* *louse*, *telo* → *tēno* *sleep*, and *bale(ho)* → *mani* *sit*. The second correspondence in this last pair TSM /b/ = IPI /m/ is further supported by the following word pair *bedele* → *mahine* *many*. TSM /d/ = IPI /h/ is also found in *digo* → *higa* *name* and *dalo* → (ba) *hato* *good* (ba- remains unaccounted for). As for the vowels it seems that in quite a few cases TSM has lower counterparts than IPI; see words for *sit* and *many* above and words such as TSM *oba* → IPI *uba* for *walk*. However, there are enough cases for counter evidence such as TSM *modo* → IPI *mada* *fly* (v), and TSM *dēhi* → IPI *dahi* *nose* that this statement can only be taken with much reservation.

Even if not all items of Chart 12 can be accepted as genuine cognates, a Family-level relationship between Tao-Suamato and Ipiko seems certain. At least Franklin's hypothesis "with more data it might be possible to reconstruct the phonemes and suggest that we are dealing with the Inland Gulf Family rather than Stock" (1973:272) is firmly supported.

Of the cultural items — foodstuffs — Tao-Suamato shares *dubali* *banana* with Gogodala and Ari, *ai* *sugarcane* with Gogodala, and *sosoamo* *sweet potato* possibly with Ari and Turama-Kikorian languages (see Set 5 for *sweet potato* Dutton 1973:437). It did not seem possible to classify *enyo* *yam* and *putali* *taro*, nor TSM *dawito* *garden*. An inclusion of the Inland Gulf Family in the Central and South New Guinea Stock (McElhanon and Voorhoeve 1970) does not seem feasible.

CHART 12

POSSIBLE COGNATES BETWEEN TAO-SUAMATO AND IPIKO

	Tao-Suamato	Ipiko	
1. <i>man</i>	ama/ami	anime	
5. <i>we</i>	ni	ni	
6. <i>all</i>	batomi	bomoti	
8. <i>hair</i>	ew(ewe)	u	ew = u
9. <i>eye</i>	ufilo	uhino	f = h
10. <i>nose</i>	dɛhi	dahi	
11. <i>ear</i>	ome <u>to</u>	th <u>u</u>	
14. <i>neck</i>	tumu [?] u	ho [?] o	m = h
15. <i>mouth</i>	mogoto	imutupu (?)	
18. <i>belly</i>	uti	uti	
19. <i>leg</i>	idiři	tepepe (?)	
21. <i>skin</i>	aipe(ie)	oipo	e = o
22. <i>bone</i>	efale	hořo	f = h l = ř e = o
29. <i>moon</i>	bubei	ubiyn	b- = ø -b- = -b-
29. <i>star</i>	bobe	opo(po)	b- = ø -b- = -p- e = o
38. <i>fire</i>	tae(li)	tai	
39. <i>smoke</i>	ofuto	ahuto	o = a f = h
42. <i>tree</i>	dɛ	dɛ	
45. <i>dog</i>	gaho	gaho	
47. <i>bird</i>	eweha	dipe(me)	ø- = d- -w- = -p-
50. <i>fish</i>	ɛbi(eme)	thope	ø- = th- -b- = -p- ɛ = o
53. <i>good</i>	dalo	(ba)hato	d = h -l- = -t-
60. <i>hot</i>	papato	babato	p = b
63. <i>new</i>	giala	(aho)garo	
67. <i>sit</i>	bale(ho)	mani	b = m l = n
69. <i>walk</i>	oba	uba	
71. <i>sleep</i>	telo	teno	l = n
76. <i>come</i>	owamo	ama	o = a w = m
77. <i>flies</i>	modo [?] ile	madabi	o = a
79. <i>name</i>	digo	higa	d = h ɔ = a
81. <i>who</i>	woteiřo	bahai	w = b o = a t = h
82. <i>what</i>	a [?] ailo	ai/ae	
84. <i>louse</i>	wali	wani (?)	l = n
85. <i>many</i>	bedele	mahine	b = m d = h
88. <i>one</i>	dagemu	dapo	-g- = -p- (?)
<i>shoulder</i>	belo	bɛno	-l- = -n-
<i>chest</i>	bita	bita	

6.3. NOTES ON PHONOLOGY AND GRAMMAR

The Tao-Suamato phonemes are most likely the following sixteen consonants: p, t, k, ʔ, b, d, g, m, n, v, s, ɣ, h, r, w, and y and five vowels: i, e, a, o, u.

It may turn out that ɔ and ɛ are separate phonemes, but the occasional fluctuation and the lack of contrasting evidence seem to point to the proposed solution, i.e. e with [e] and [ɛ] as realizations and o with [o] and [ɔ].

With respect to the consonants, it may become more economical to have the fricatives v and ɣ as variants of /b/ and /g/, in which case [f] would be assigned to /p/.

As it is now we have one example of the sequence -ny-; perhaps this should be interpreted as ñ when more instances of this sound (sequence) are found.

The data obtained does not suggest a separate pronoun-set for a dual. The forms that Franklin lists are identical to the word for *two*, which was heard in combination with the plural pronouns.

The set on the basis of the present data is as follows:

	singular	dual	plural
1	no	nigo	ni
2	go	dau kiai	dau or do/eti
3	go/ɛyɛ/bɛ	ami ukiai	dau or do/eti

Neither does the verb system seem to express a dual:

ama dagemolo	bɛʔuilowo	<i>one man stands</i>
ami ukiai	bɛʔuilabola	<i>two men stand</i>
ami mahigagi	bɛʔuilabola	<i>three men stand</i>

At least three tenses seem to be expressed:

ama mowa	<i>the man goes</i>
ama daho mowane	<i>the man went yesterday</i>
ama dihu mowawe	<i>the man will go tomorrow</i>

The basic order in a simple sentence is something like this:

Agent (or Subject) Time Object ±Negative Predicate

7. WAIA

7.1. GENERAL

This language is spoken at Waia, Saiwasi, Garu, Alagi and Tabepi, and Arikinapi on the Aramia River and two villages on the north bank of the Fly River (see also Franklin 1973:17). The number of speakers

is unknown, but there may be around 700 people who speak the language we call Waia.

7.2. RELATIONSHIPS

Waia is believed to have "a 10-12% lexical relationship with languages of the Kiwaian Family, but over 15% with Gogodala. The language is located adjacent to both groups and may be a member of what Voorhoeve (1970a) has described as the Suki-Gogodala Stock" (Franklin 1973:17).

In the same volume however, Wurm states that Hiwi and Hibaradai (Annual Report 1920) are "Waia, a language apparently belonging to the Pahoturi River Family of the Trans-Fly Stock. The Kiwaian Family also belong to that Stock" (Franklin 1973:256).

Since Sisime and Pirupiru are geographically the closest Kiwai dialects it seemed reasonable to compare these with the Waia data from the present study.

Riley and Ray's material (1930-1) allowed a comparison of 112 words with Sisime (72 of which are from the Swadesh 100-item list), of 105 words with Pirupiru (67 from Swadesh's list), and of 118 with Kiwai proper (74 from Swadesh's list).

A full list of suspected cognates is given in Chart 13.

CHART 13

POSSIBLE COGNATES OF WAIA, SISIME, PIRUPIRU, AND KIWAI Data for Kiwai languages from Riley and Ray (1930-1)

	Waia	Sisime	Pirupiru	Kiwai
<i>arm</i>	kokotope	tu	tu	tu
<i>ashes</i>	tuwi	panese	tuo	tuwo
<i>bad</i>	kubala	ubauba	ubaubai	uba
<i>blood</i>	hawi	savi	savi	arima
<i>bow</i>	gagali	gaari	gare	gagari
<i>cassowary</i>	diwale	diware	diware	diware
<i>cloud</i>	bubu	bubutoboro	toboro	bubuere
<i>(he) dance(s)</i>	(nɛ) mæ	komaro	omaro	amaro
<i>ear</i>	galo	gare	gare	gare
<i>earth/soil</i>	hopu (K.F.)	—	sopu	sopu
<i>egg</i>	kikipo	iopu	iopu	iopu
<i>father</i>	nabi	baba	—	abera
<i>fingernail</i>	pitu	mudubi	—	tu-igiri-pitu
<i>foot</i>	(nato)pata	—	(sairo)pata	(sairo)pata
<i>go</i>	(nɛ)tona	dou	dou	ai/ogu

(Chart 13 continued)

	Waia	Sisiame	Pirupiru	Kiwai
<i>knee</i>	pupu	kaufio	kaufi	popu
<i>knife</i>	giri	—	—	giri
<i>laugh</i>	wali	wari	wari	wari
<i>leaf</i>	paha	pori	pori	pasa
<i>lie down</i>	(nɛ)wata	dutua	dutua	utud
<i>man</i>	dubu	dubu	dubu	dubu
<i>many</i>	hirionomo	sirioie	topira	sirio
<i>moon</i>	manomi	sogomi	sogomi	sagana
<i>morning</i>	duiduiala	kwarofo	kuarofo	duduerere
<i>mountain</i>	podo	podo	podo	auwo-damero
<i>name</i>	mahiro	masiro	masiro	piana
<i>neck</i>	abau	mau	dopa	mau
<i>new</i>	uli	orio	orio	orio
<i>night</i>	du	duo	duwo	duwo
<i>road</i>	gabo	gabo	gabo	gabo
<i>skin</i>	tama	tama	tama	tama
<i>sleep</i>	(nɛ)wata	uwo	uwo	uwo
<i>smoke</i>	ahuta	gahua	gafua	tema
<i>thumb</i>	kauto	tukoi	koi/tukoi	oto
<i>two</i>	nɛtɛwɔ	netoa	netoa	netewa
<i>water</i>	bea	obo	obo	obo
<i>what</i>	badame	dabaro	bedara	beda
<i>wind</i>	huhu	uro	fufuo	sususwo
<i>yesterday</i>	dutu	dutu	dudu	duwotou

Chart 14 gives the percentages of possible cognates between these languages. On the basis of these figures it may seem reasonable to include Waia in the Kiwaian Family, though a more remote Kiwaian language such as Anigibi shows only a 19% relationship with Waia.

CHART 14

COGNATE PERCENTAGES BETWEEN WAIA AND OTHER KIWAIAN LANGUAGES
ON THE BASIS OF SWADESH 100-ITEM LIST AND
ON THE BASIS OF THE EXTENDED LIST

	Sisiame	Pirupiru	Kiwai
Swadesh list	32%	34%	28%
number of words compared	72	67	74
extended list	30%	32%	29%
words compared	112	105	118

The following regular sound correspondences may be noted: WAI h = SIS, PIR, and KIW s: WAI hawi → SIS, PIR savi *blood*; hopu → sopu *ground*; paha → KIW pasa *leaf*; mahiřo → masiro *name*.

Wurm (1973:234) notes this correspondence for Coastal Kiwai h and Island Kiwai s.

WAI e or i = KIW o: WAI tuwi → tuwo *ashes*. This correspondence is also illustrated by the word-pair WAI kikipu → KIW iopu *fruit*.

Wurm (1973:237) compares Wabuda with other Kiwaian languages by the correspondence of WAB -k- and -t- and other languages ø: WAB kikopu → Bamukiwai iopu *fruit* or *egg*.

In some cases Waia also has retained k, though in other words it has lost the initial velar stop: WAI ubida → SIS, PIR kobira *banana* but has retained the intervocalic -t-: WAI ahuta → SIS gahua → PIR gafua *smoke*. This series shows a possible -h- -f- correspondence which is supported by WAI huhu → PIR fufuo → KIW sususwo *wind*. Although it is difficult to say that l and ř are mutually exclusive in Waia (cf. Wurm's general comment on Kiwaian Phonology 1973:226), and other languages, in quite a few cases WAI l corresponds with Kiwaian r: wali → wari *to laugh*; gagali → gagari *bow*; galo → gare *ear*. The latter part of course reverts the above mentioned WAI e or i = KIW o.

There is some conflicting evidence in the proposed sound changes. Besides that, the pronoun systems of Waia and Kiwaian languages seem to be quite different, which is believed to be counterevidence for genetic relationship (see Chart 15). A more reliable establishment of the Waia data is necessary though, before this can be used as hard evidence.

CHART 15

PRONOUN SYSTEMS OF WAIA AND KIWAIAN LANGUAGES

Waia		Kiwai	
singular	plural	singular	plural
1 ma	le/ahiřio	mo	nimo
2 ame	le	ro	nigo
3 ame	le	nou	nei

A third point against inclusion of Waia in the Kiwaian Family is the fact that this would be on the basis of an exceptionally low cognation percentage. All Kiwaian languages classified by Wurm show much higher percentages of shared basic vocabulary cognates (Wurm 1973:222).

As far as a connection with Gogodala is concerned, on the basis of the present data not more than an 11% lexical relationship could be

established. But this figure seems to involve loanwords rather than genuine cognates, as may be seen from Chart 16.

CHART 16

GOGODALA LOANWORDS IN WAIA

		Waia	Gogodala
13.	<i>tongue</i>	mɛlɛpila	mɛlɛpila
24.	<i>bone</i>	goha	gosa
27.	<i>sun</i>	kadɛpa	gadɛpa
37.	<i>mountain</i>	pɔ:dɔ	pɔ:dɔ
43.	<i>root</i>	haha	sasa
54.	<i>long</i>	gɛgɛla	gigise (bɛga)
58.	<i>yellow</i>	hipawala	wasa
62.	<i>full</i>	etabu	tau (bɛga)
64.	<i>eat</i>	nɛna	na-
76.	<i>come</i>	nɛpɛ	pɛia
90.	<i>know</i>	nayɛtawara	itawa

Note however that here again sound correspondences seem to occur:

WAI -h- = GOG -s- : goha → gosa *bone*; haha → sasa *root*

WAI -l- = GOG -s- : gɛgɛla → gigise *long*; (hipa)wala → wasa *yellow*

7.3. NOTES ON PHONOLOGY

Tentatively the following phonemes may be noted for Waia consonants: p, t, k, b, d, g, m, n, h, l [ʎ, l], w, and y; s occurs only in masaga *yam*, apparently a very recent loan-word from Gogodala. Vowels are: i, e, a, o, u, with possible phonemic function of ɛ and ɔ also.

Lengthened vowels are quite frequent and seemed to be phonemic. No consonant clusters other than Cw or Cy have been noted. More data is required for any statements about the morphology and grammar.

7.4. CONCLUSION

The combined evidence does not rule out the possibility that Waia is rather separated both from Kiwaian languages as well as from Gogodala. It may be that Waia has close relationships (i.e. higher than stock-level) somewhere else and that it has heavily borrowed from its neighbours. These borrowings would not be very old but were rather quickly absorbed in its own phonological system. Waia shares a few loanwords, with similar phonetic adaptations, from Kiwaian languages with Minanibai of the Inland Gulf Family (see Chart 17).

CHART 17

SHARED LOANWORDS FROM KIWAIAN LANGUAGES
IN WAIA AND MINANIBAI

	Waia	Minanibai
<i>fat</i>	<i>gadi</i>	<i>gadi</i> (see Tureture, Wabuda, and Kiwai)
<i>cloud</i>	<i>bubu</i>	<i>bubu</i>
<i>ground</i>	<i>hopu</i>	<i>sabo</i>
<i>dog</i>	<i>gaha</i>	<i>gahoi</i>
<i>leaf</i>	<i>paha</i>	<i>paho</i>

Besides these Kiwaian loanwords Waia and Minanibai share *nono breast*, while *amo* is quite diagnostic for a number of Kiwaian languages.

Wurm's statement that Waia apparently belongs to the Pahoturi River Family could not be confirmed when the present data for Waia was compared with recent wordlists⁷ from Kiwang — a village where Idi is spoken and Kibuli where Abög is spoken. These two languages, Idi and Agöb constitute the Pahoturi River Family.

The people's witness that they are losing their "true language" may confirm that there is a heavy borrowing from the neighbouring languages. A genuine genetic relationship could not be found for Waia.

8. CONCLUSION

There are six different languages spoken in the Aramia River area. Most of these languages are not related, or are only remotely related, to each other. Ari or Waruna (?) may be included in one Family with Gogodala. This Family then forms a Stock together with Suki.

The other languages seem to have their relationships outside this area.

There is reasonable evidence that Bainapi does not constitute a separate Family within the Bosavian Stock, but that it can be included in the Bosavi Family on the basis of the cognates shared with Kaluli.

If Kamula is to be classified in a level higher than the Phylum it will most likely fall into a Stock-level relationship with Pa, a language of the West-Strickland or Awin-Pa-Family.

Tao-Suamato seems to be a member of the Inland Gulf Family together with the unidentified language Mahigi, Minanibai, and Ipiko, confirming Franklin's expectation (Franklin 1973:272).

Waia, finally, though sharing a rather high percentage of cognates with Kiwaian languages and a Stock-level percentage with Gogodala has

its real genetic relationships outside this area. It has adopted a rather large number of loanwords from its neighbouring languages and it will most probably continue to do so.

NOTES

1. Numbers refer to the order of the 100-item lists as they appear in the appendices in Franklin 1973 and the present study. The list is the Swadesh 100 wordlist in the order in which it appears in Wurm's modified TRIPP wordlist. This list does not contain the words: *leaf, meat, horn, claw, person, seed, round, dies* (see Laycock 1970:1129) which have been taken from the SIL standard list. However, for this study the latter list had been adapted and reorganized according to better semantic groupings. Words for *swim, horn, and person* were not elicited.

2. Two words for one item of the test list are completely different when consonants and vowels differ in such a way that it is not plausible that the same word was meant by the informant(s). Some of the complete differences might turn out to be substantially the same if we knew more about tenses and morphophonemic changes.

In the case of the other languages, Bainapi and Tao-Suamato an additional criterion holds, namely none of the wordlists obtained in this study yield the same (or very similar) response as the one given in Franklin (1973).

3. Usage of lingua franca or bilingual informants can give its own problems. When I started to elicit the personal pronouns in Waia, I received a good word for *I* [ai], namely *baidi*, but this means *eye* [ai] (see Chart 1).

4. It seems very unlikely that responses on the same word of a test-list that yielded a cognate pair would turn out to be invalid because of too wide a semantic range.

5. The wordlist for Suki was obtained with help from Mr G. Martin of APCM at Suki, who is in the process of translating the New Testament into Suki.

6. Provided of course the migration was not in the opposite direction, in which case the Foe came from the Bainapi area.

7. The Agöb list was taken by Miss L. Fleischmann and Miss S. Turpeinen; the list for Idi by Mr F. Mecklenburg, members of the Summer Institute of Linguistics.

APPENDIX A

LEGEND

The main languages dealt with in this article are listed alphabetically here, with the Family or Stock they belong to in parenthesis. Alternate names and sources are given. Then the villages in which the language is spoken are listed.

- Ari: (Gogodala Family) Waruna (?) (Riley and Ray 1930-1)
Villages: Ari and Serea (?).
- Bainapi: (Bosavi Family) Dibiasu (Klieneberger 1957, Wurm 1971a, Franklin 1973), Turumasa
Villages: Makapa, Pikiwa, and Bamustu.
- Kamula: (Stock-level relationship with West-Strickland Family?)
Kamura (Capell 1962, 1969)
Villages: Wasapea, Keseki, and Sokolonepi (?).
- Tao-Suamato: (Inland-Gulf Family) Dausame
Villages: Parieme-Sipoi, Diwami, Kubeai, Wareho, and Ugu.
- Waia: (?) Hiwi, Hibaradai (Wurm 1973),
Kenedibi (Capell 1962, Franklin 1973:17), Kawakarubi
(APCM and Gospel Recordings Inc.)
Villages: Waia, Saiwasi, Garu, Alagi, Tabepi,
Arikinapi, and two villages on the north bank of the
Lower Fly River of which Kenediba is one.

APPENDIX B

WORDLISTS

(In the form of the Swadesh 100-item list in the order in which it appears in Wurm's Lexicostatistical Comparisons (see Laycock 1970:1128))

English	Ari	Bainapi	Kamula	Tao-Suamato	Waia
1. <i>man</i>	dalagi	sau	opřami	ama	dubu
2. <i>woman</i>	atogi	tawoi	eya	ifa	kamena
3. <i>I</i>	nε	nanε	nε/æ	no/bita	baidi/na (K.F.)
4. <i>you</i> (sg.)	ε	gagε	wε/æ	go	amε
5. (incl.)	sε	nini	diæ	nigo	le
6. <i>all</i>	weabεga	ninigutute/ otomεε	haplomo	bedele/batomi	hirionomo
7. <i>head</i>	gabi	dapokala/ bisikoki	dokupala	gia	wato
8. <i>hair</i>	ti:ta	bisikaka	kokosasi	ewewe	hinibo
9. <i>eye</i>	tokodaba	usa	inoma	ufilo	baidi
10. <i>nose</i>	ndogu	deimu	mu	dεhi	dɔ:po
11. <i>ear</i>	kεso/ etudaba	kosořopa	molo	omεto	galo
12. <i>tooth</i>	po:so	beseřepa	εpe	bεhe	lalo
13. <i>tongue</i>	mεnapila	mεteta	te	ɔda	mεlapila
14. <i>neck</i> (<i>nape</i>)	nanato/ utima	timoku	tumuku	tumu?u	abau
15. <i>mouth</i>	takadaba	kalu	mati	mogoto	tabo
16. <i>arm</i>	tambi/ tabekobe	tapi	dɔ	pipini	kokotope
17. <i>breast</i>	omo	bu	meme	dolo	nono
18. <i>belly</i>	kasu	kupa	kɔkɔ	uti	te:po
19. <i>leg</i>	gupi	tupa	εte	idiři	nato
20. <i>knee</i>	misikawa	gutū	aruma	omu u	pupu
21. <i>skin</i>	kakala/ puka	baua	kapala	aipele/gigi	tama
22. <i>blood</i>	dede	balipa/ memere	umali	dahage	hawi

	English	Ari	Bainapi	Kamula	Tao-Suamato	Waia
23.	<i>fat</i>	gigima/ mbimali	sai	obi	gadi/gomi	gadi
24.	<i>bone</i>	mboige	ki	ero	efale	goha
25.	<i>heart</i>	aʔipo	soroakwa	dupa	sosolo/muʔi	owekikipo
26.	<i>liver</i>	midimidi (?)	komsai/ sukuno (K.F.)/ paliki/kupui	usuala	ivo	aʔa
27.	<i>sun</i>	gadepa	male	sali	naumu/sei/ bubei	kadepa
28.	<i>moon</i>	toko	iliepe	mama	siwo/bubei	manomi
29.	<i>star</i>	ituake	bepeaii	tameli	bobe	oloki
30.	<i>cloud</i>	i:wa	paupa/do	uala	ofuto/ aleta	bubu
31.	<i>rain</i>	ku:sa	daiagisoro	tio	goloi/daleho	wegola
32.	<i>night</i>	i:sa	dapo/tupitiau	utrana (t)	diʔa	duʔ
33.	<i>water</i>	ogo	daia	yu	saʔagi	bea
34.	<i>ground</i>	tamaka/kei	ʔe	tana	boti	aka/hopu (K.F.)
35.	<i>stone</i>	— (nadi)	ko	yawaʔa	amahe	— (nadi)
36.	<i>sand</i>	dinige	(m)okase	asiʔa	giri/so oboi/ sopuli	pohoʔu
37.	<i>mountain</i>	pokola	bati	tamali (t)	kakabu	po:do
38.	<i>fire</i>	awa	daʔau/betate	dʔaba	taeli	kue:
39.	<i>smoke</i>	aukabu	do	namne	ofuto	ahuta
40.	<i>ashes</i>	pulu/ bamoba	dupu/damokopa/ kamu	tile (t)	sopiti/gutale	tuwi
41.	<i>path</i>	nape	iti	api	idi	gabo
42.	<i>tree</i>	yei	bosa	dali	de	keha
43.	<i>root</i>	sasa	bosababa/kase/ eposau	dʔusaʔo	meʔele/upoli	haha
44.	<i>bark</i>	yeipuka	baua	kapala	aipela/iʔa	tama
45.	<i>dog</i>	soke	sapo	esemala	gaho	gaha
46.	<i>tail</i>	yadaba	koʔokawa	tile (t)	gogoamu/wahe	e:to
47.	<i>bird</i>	sola	meta	tea	eweha	hola
48.	<i>feather</i>	kiele/ solakona	kaka/kwasapa	teaka/ kosopa	eweha ewewe	kieʔi
49.	<i>egg</i>	momona	kwapa	temoko	putu	kikipo
50.	<i>fish</i>	buʔukumi	kaipi	amano	ebi (ʔeme)	daha
51.	<i>big</i>	—	gutute	pato	golioliwo	—
52.	<i>small</i>	—	sia	yikyamena (?)	—	—
53.	<i>good</i>	sekema	waleta/tikiʔi	tegedʔe	dalo(le)	hidola
54.	<i>long</i>	elago	meimiri/memeli	samanina	golioliwo	gegela
55.	<i>red</i>	dede	balipatapa	ontakapela	bitiwogo	hawi

English	Ari	Bainapi	Kamula	Tao-Suamato	Waia
56. <i>white</i>	enugu	okatəpa	kamale	abuogo	keakeala
57. <i>black</i>	kisunapa	daputəpa	dikəli	botəho	bumibumi
58. <i>yellow</i>	ɛiluku	metəpa	waləɛ	etawogo	hipawala
59. <i>green</i>	—	katətəpa	(dali) pasakalo	awosə [?] iwogo	gyedola
60. <i>hot</i>	tətə	sitau-	ařamanama	papato	otanotano
61. <i>cold</i>	kaka (pili)	soso-/babit-	atakala/ popoma	domoge	gibagibařa
62. <i>full</i>	agutawa	tapau	pasatana/ bosatana	mahəwate/ etahəwato	etabu
63. <i>new</i>	kanike	kokalia	amoko	giala	uli
64. <i>eat</i>	na-	na-	dampřoma	moze/danimo	nɛ:na
65. <i>drink</i>	ni(de)-	nu-	yüdəma	bedemo/moleme	nene
66. <i>stand</i>	elele/ pakawa	dasi-	siřetəma	uilowo	nute
67. <i>sit</i>	maine	eso-	yepřoma	baləho/məmie	nəřata
68. <i>speak</i>	teyawa/ gialelele	mado-	yugama	bəaitame	negwita
69. <i>walk</i>	nene	an-	toma	owa(molo)	nɛtəna
70. <i>give (to me)</i>	natalele	mina-	hamima	nomonai	nikaname
71. <i>sleep</i>	tenele	usiati-	eřema	telo/moteia	nəwata
72. <i>lie down</i>	tenele	usiati-	eřema	(oi)telo	nəwata
73. <i>see</i>	tapili/ bamowa	boso-	natima	mo [?] ote/ ma [?] anote	nu:mi to
74. <i>hear</i>	enomane/ enemawa	apki-	dařoma	bewo/mauwe	(galamo) nuliɛ
75. <i>swim</i>	—	—	—	—	—
76. <i>come</i>	pele	mini-	puma	bəowamo	nɛpe
77. <i>flies</i>	putilele	pio-	horomsiřema	modo [?] ile	ɛpwida
78. <i>bite</i>	apailame	mak ^ə li-	yəřema	motabe/walama	tea:lo
79. <i>name</i>	enoma	yo	hi	digo	mahiřo
80. <i>dry</i>	apapa	seyau-	sekərema	etaupata/patea	gagalela
81. <i>who</i>	ɛpoate	dabřa	anaye	woteiřo	poko
82. <i>what</i>	ponote	yaloa	apate	a [?] ailo	badame
83. <i>burn (int.)</i>	mbailele	aro-	ene/ uřuřuma	bigoi/ladcha	eiwe
84. <i>louse</i>	ikami	pe	iya	wali(eme)	tamali
85. <i>many</i>	welabəga	witiata/gutute	habřoma	bedele	hiřionomo
86. <i>this</i>	mo(eta)	aye	yɛ/ [?] i	ɛti/wobo	mwe
87. <i>that</i>	kɛia(eta)	amo	uni/hu	ɛtiɛ	bə [?] ela
88. <i>one</i>	maitaia	makate	hatrope	dagemu	kapia
89. <i>two</i>	saki	ařapa	dapiamete	ukia	nɛtəwə
90. <i>knows</i>	itawa	nauma-	məřamana	imihaum	nayətawařa
91. <i>kills</i>	tudawa	toa	yuma	lagamoile/ mowa [?] ɛ	galimiha

	English	Ari	Bainapi	Kamula	Tao-Suamato	Waia
92.	<i>not</i>	neima	namo	hawa	biaie	akatoale
93.	<i>leaf</i>	ekele	isipa	uba	buale/bahai	paha
94.	<i>meat</i>	ukapi	(o)moko	mo	ailu	kateni
95.	<i>horn</i>	—	—	—	—	—
96.	<i>claw</i>	gupi	tupa (<i>leg</i>) kapa (<i>nail</i>)	kakre/ tukasi	ti'emi	pi:tu
97.	<i>person</i>	—	—	—	—	—
98.	<i>seed</i>	yyepila toko	ukuma	moko	bomode	kiha kiki po
99.	<i>round</i>	—	pipiau	si'idena	putoia	mokopi
100.	<i>dies</i>	kumiwo	ip-/karsabe	poma	mo'aha/ etu'aha	ehwe

BIBLIOGRAPHY

CAPELL, A.

1962a *A Linguistic Survey of the South-Western Pacific*. New and Rev. Ed. Technical Paper No. 136. Noumea, New Caledonia: South Pacific Commission.

1969 *A Survey of New Guinea Languages*. Sydney: University Press.

DUTTON, T. E.

1973 '"Cultural" Items of Basic Vocabulary in the Gulf and Other Districts of Papua'. In: Franklin ed. 1973:415-538.

FRANKLIN, K. J., ed.

1973 *The Linguistic Situation in the Gulf District and Adjacent Areas, Papua New Guinea*. PL, C26.

HEALEY, A.

1970 'Proto-Awyu-Dumut Phonology'. In: Wurm and Laycock, eds 1970:997-1063.

KLIENEBERGER, H. R.

1957 *Bibliography of Oceanic Linguistics*. London Oriental Bibliographies Vol. 1. London: Oxford University Press.

LAYCOCK, D. C.

1970 'Eliciting Basic Vocabulary in New Guinea'. In: Wurm and Laycock, eds 1970:1127-76.

LYONS, J.

1969 *Introduction to Theoretical Linguistics*. London: Oxford University Press.

McELHANON, K. A.

- 1971 'Classifying New Guinea Languages'. *Anthropos* 66:120-44.

McELHANON, K. A. and C. L. VOORHOEVE

- 1970 *The Trans-New Guinea Phylum: Explorations in Deep-level Genetic Relationships*. PL, B16.

RILEY, E. B. and S. H. RAY

- 1930- 'Sixteen Vocabularies from the Fly River, Papua'.
1931 *Anthropos* 25:173-94, 831-50; 26:171-92.

SHAW, R. D.

- 1973 'A Tentative Classification of the Languages of the Mt. Bosavi Region'. In: Franklin, ed. 1973:187-216.

VOORHOEVE, C. L.

- 1968 'The Central and South New Guinea Phylum'. PL, A16:1-18.
- 1970a 'Notes on Suki and Gogodala'. In: Wurm and Laycock, eds 1970:1245-70.
- 1970b 'The Languages of the Lake Murray Area'. PL, A25:1-18.

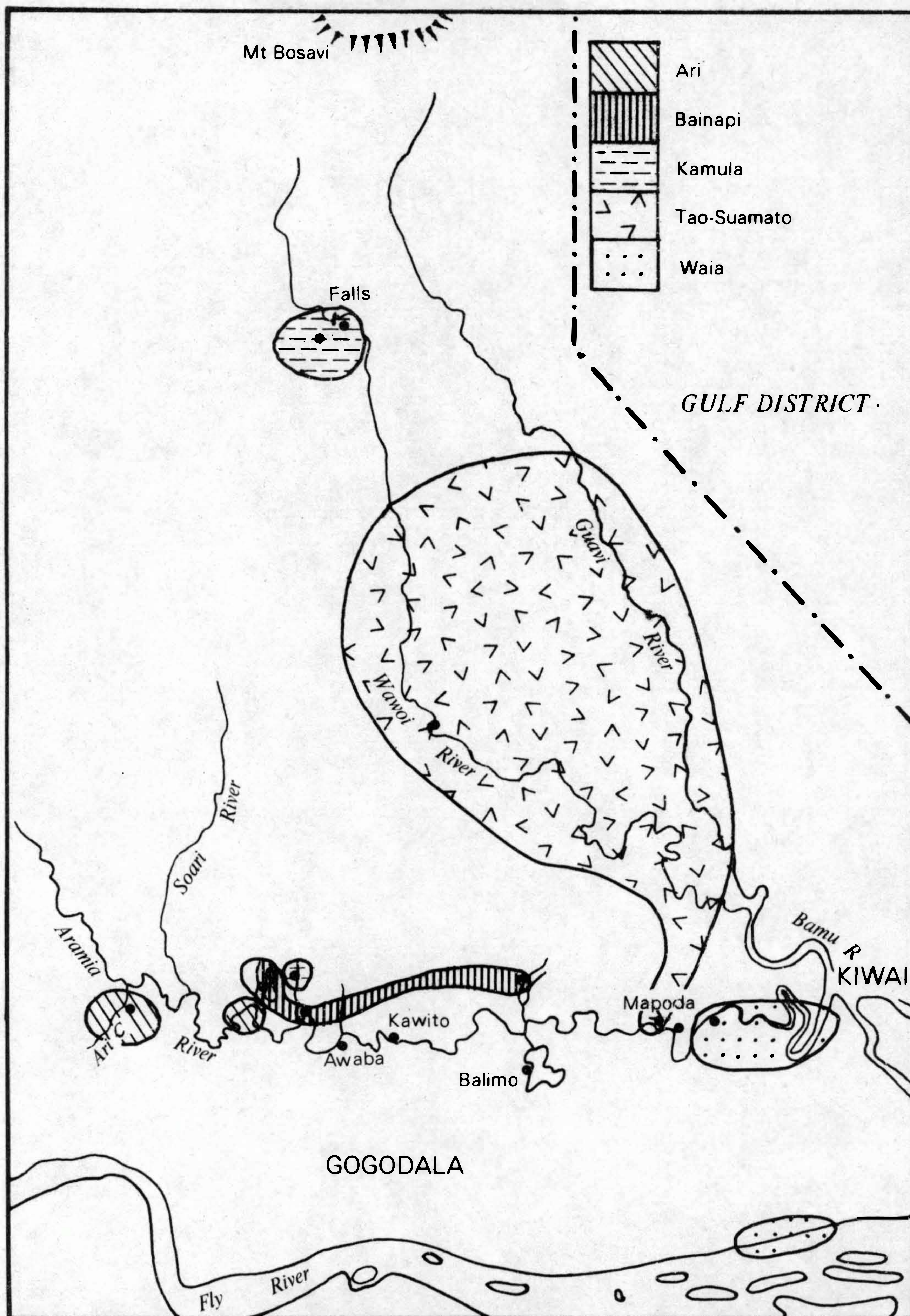
WURM, S. A.

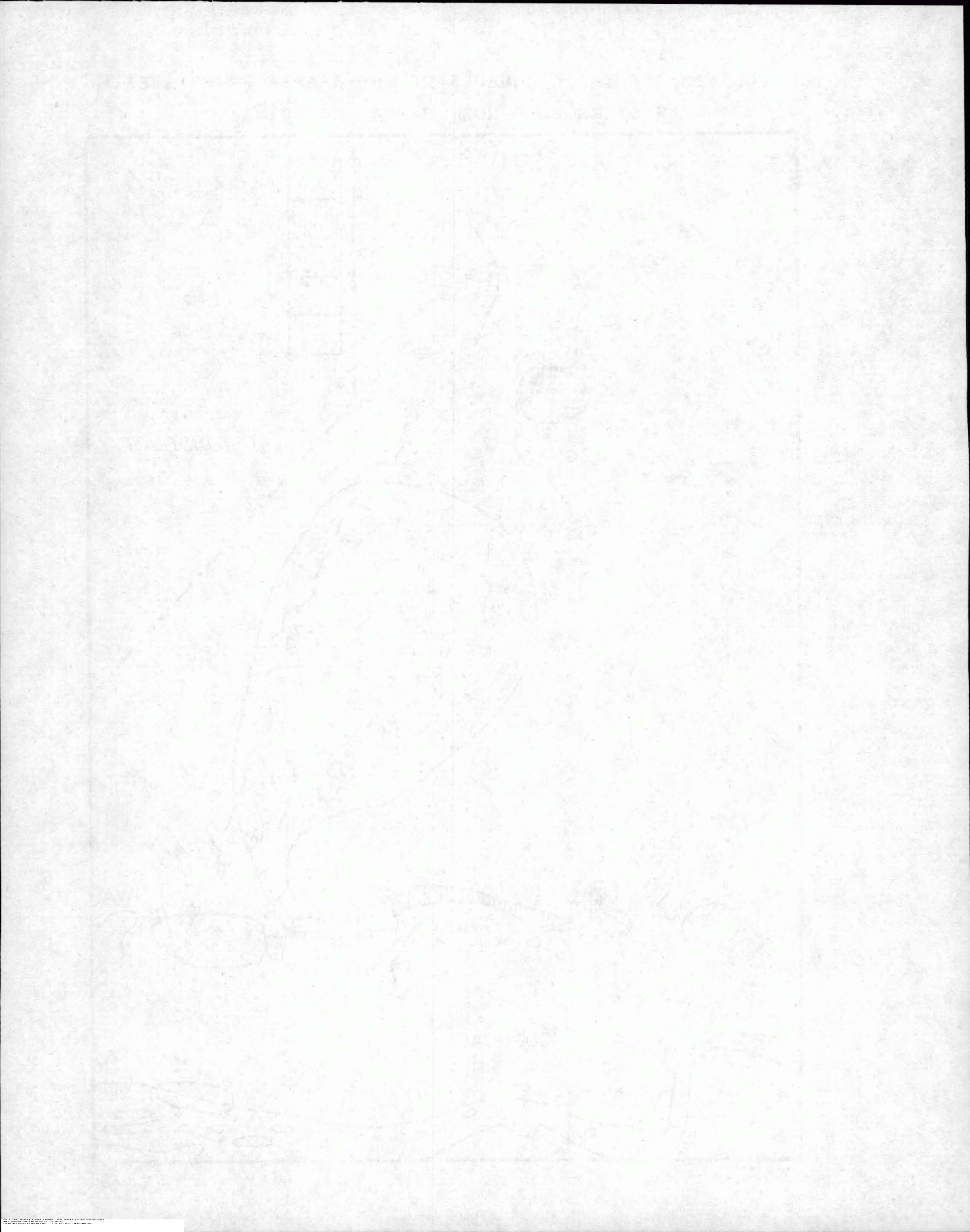
- 1971 'The Papuan Linguistic Situation'. *Current Trends in Linguistics Vol. 8: Linguistics in Oceania*. T. Sebeok, gen. ed. The Hague: Mouton. pp.541-657.
- 1971 'Notes on the Linguistic Situation in the Trans-Fly Area'. PL, A28:115-72.
- 1973 'The Kiwaiian Language Family'. In: Franklin, ed. 1973: 219-60.

WURM, S. A. and D. C. LAYCOCK, eds

- 1970 *Pacific Linguistic Studies in Honour of Arthur Capell*. PL, C13.

LOCATION OF THE LANGUAGES OF THE ARAMIA RIVER AREA,
WESTERN PROVINCE, PAPUA NEW GUINEA





A DIALECT SURVEY OF EASTERN TRANS-FLY LANGUAGES

LILLIAN FLEISCHMANN and
SINIKKA TURPEINEN

1. INTRODUCTION

A survey of dialects was carried out as part of a language survey of the lower portion of the Western District — Papua New Guinea. This survey was conducted by several members of the Summer Institute of Linguistics in August 1974. During the survey the writers visited nearly all of the villages belonging to languages of the Eastern Trans-Fly Family. The Eastern Trans-Fly Family is a member of the Trans-Fly Stock of the Trans New Guinea Phylum (Wurm 1971).

The survey was made possible by a grant from the New Guinea Research Fund of the Summer Institute of Linguistics (SIL). The use of a helicopter provided by SIL's Aviation Department was of tremendous help in reaching the villages within this area of many swamps.

Several villages were beyond the reach of the helicopter because of the time and distance involved in locating them. A number of villages have moved within the last few years, often but not always, adopting a new name in their new location. Thus, maps of the area quickly become outdated. Other villages, when reached, had no suitable place for the helicopter to land.

A word list was collected in each village visited. The Standard Word List of the SIL in Papua New Guinea, as described by Bee and Pence (1962), along with its Lowlands Supplement, was used in many locations. However, another version of this list, re-ordered and slightly expanded, was used on other occasions. Elicitation was through English or Motu. In several villages where neither of these was understood, the elicitor used a neighbouring language or dialect.

Word lists from villages where the helicopter could not land were obtained from students at Daru High School. Also, students helped to complete several lists where villagers were unable to respond when given difficult concepts, such as *round*, in a foreign language.

From these lists 100 items roughly corresponding to Swadesh's 100-Word-list, were selected for comparison; items on the Swadesh list are starred in the Appendices for easy identification. The 100-word lists were examined for apparent cognates among the villages within each language boundary. Selected dialects were also chosen for comparison across language boundaries. Cognate counts were then made and percentages calculated. In several Gidra lists where words were missing from the selected 100, the final cognate percentage figures were adjusted accordingly. One percentage point was subtracted from each percentage score where ten items were missing. Two percentage points were subtracted where more than ten items were missing (Hooley 1971).

2. OVERVIEW OF THE AREA

The Eastern Trans-Fly Family is composed of four languages: Bine, Gidra, Gizra, and Miriam. It occupies most of the area between the Oriomo and the Pahoturi Rivers and the eastern islands of the Torres Straits. Miriam was not included in the survey upon which this report is based. It is spoken by approximately 700 people living in the eastern Torres Strait Islands of Australia.

In 1971 Wurm published cognate percentage figures for the Eastern Trans-Fly languages as follows:

Bine			
42	Gidra		
38	34	Gizra	
28	26	37	Miriam

The writers chose the Kunini dialect of Bine, the Waidoro dialect of Gizra, and the Gamaewe dialect of Gidra to compare three of the languages within the Trans-Fly Family. The cognate percentage figures for the 100 word list are as follows:

Bine		
39	Gidra	
36	32	Gizra

These scores are consistent with Wurm's figures and only slightly lower.

3. DETAILS ON THE BINE LANGUAGE

Bine is spoken by approximately 1800 people. The majority of these live in nine villages. Masingle, Kunini, and Boze are located along the Binaturi River and Giringarede on its tributary. Sebe (Wabozí) is located on the Pahoturi River. Täti, Irupi, Drageli, and Sogal are located between the two rivers. Three former Bine villages have been abandoned: Äliple, Glulu, and Usore. Also, Wurm lists Dirimu as a tenth Bine village. This is now a co-operative copra plantation with no permanent dwellings. Another former Bine village, Gamaewe, has become predominantly Gidra speaking. Glabi, an Agöb village, has become bilingual in Bine. There are also a number of Bine speakers living in neighbouring villages and in Daru.

Chart A gives cognate percentage figures for a list of 100 lexical items, and also for an extended list of the 100 plus 50 additional items. The vocabulary lists are included in Appendix A. Thirteen words were dropped from the original 100 because of inability to elicit them consistently, and thirteen others were added to replace them.

CHART A: BINE COGNATE PERCENTAGES

Sogal								
<u>93</u>	Giringarede							
93								
<u>93</u>	<u>100</u>	Boze						
94	99							
<u>90</u>	<u>97</u>	<u>97</u>	Kunini					
91	98	97						
<u>89</u>	<u>87</u>	<u>87</u>	<u>90</u>	Täti				
91	89	89	91					
<u>83</u>	<u>84</u>	<u>84</u>	<u>87</u>	<u>90</u>	Masingle			
84	85	85	87	88				
<u>86</u>	<u>85</u>	<u>85</u>	<u>85</u>	<u>89</u>	<u>85</u>	Sebe		
88	87	87	87	90	86			
<u>87</u>	<u>85</u>	<u>85</u>	<u>82</u>	<u>88</u>	<u>86</u>	<u>91</u>	Irupi	
88	86	87	84	89	87	91		
<u>85</u>	<u>85</u>	<u>84</u>	<u>81</u>	<u>88</u>	<u>87</u>	<u>91</u>	<u>97</u>	Drageli
86	85	85	83	88	88	91	97	

Note: The underscored numbers are for a 100 word list; the numbers below them are for a 150 word list. The lines direct attention to the higher scores.

Normally, one would expect slightly lower percentages from the longer list (Hooley 1971; Swadesh 1954). This did not prove to be true. With two exceptions the longer list produced the same or slightly higher percentages than the shorter list. Probably this

happened because the first 100 words contained a number of items that were hard to elicit consistently while the additional fifty words were not as troublesome. One exception was for Giringarede and Boze where the percentage dropped from 100 to 99 as a word was found in the longer list that was not cognate. Also, the Tāti and Masingle percentage dropped from 90 to 88 as the longer list contained more words that were not cognate.

The similarity between the percentage figures for the two lists lends validity to the use of a 100 word list. Never was the difference greater than two percentage points, and because of the particular 100 items chosen, the shorter list does not produce unrealistically high scores.

All percentage figures for both lists fall within the range of dialects of a single language, according to the figures given by Swadesh (1954) as 100-81% cognates.

The lowest scores are Kunini with Drageli (81%), Kunini with Irupi (82%), and Masingle with Sogal (83%).

The highest scores are as follows:

Giringarede with Boze	100%
Giringarede and Boze with Kunini	97-100%
Irupi with Drageli	97%

These scores, especially those of Giringarede and Boze, require further investigation to determine whether they are separate dialects or one dialect.

While criteria have been established for distinguishing between a dialect and a language (Swadesh 1954; Voorhoeve 1968), it is difficult to set up criteria for separating dialects or for combining them. Thus, the criteria selected for the purpose of this report are quite subjective. These are:

- (1) a cognate percentage of 95% or above
- (2) at least 80% of word lists recorded identically
- (3) villagers' affirmation: "They speak just the same as we do."

Chart B shows the number of words out of 100 that are identical between dialects. Boze and Giringarede have 98 out of 100 words that are the same. Thus, Giringarede-Boze will be considered one dialect. Kunini, while sharing 97% cognates, has only 52% of words identical with Giringarede-Boze, so it remains a separate dialect. Irupi and Drageli, also with 97% cognates, have 91 out of 100 words in common. The people say that they speak just the same. Irupi-Drageli will also be considered one dialect. It is interesting that Sogal and Sebe have

68 out of 100 of their words in common, yet they are only 86-88% cognate.

CHART B: BINE IDENTICAL WORD PERCENTAGES

Sogal									
60	Giringarede								
61	98	Boze							
39	52	53	Kunini						
41	45	46	51	Täti					
32	32	32	46	52	Masingle				
68	50	50	38	51	30	Sebe			
42	27	27	38	27	34	42	Irupi		
39	26	24	39	31	41	45	91	Drageli	

4. DETAILS ON THE GIZRA LANGUAGE

Gizra is spoken by about 700 speakers living in the villages of Waidoro, Kupere, and Togo. These are located east of the Pahoturi River and not far inland from the coast. Kupere is located on a small river that is navigable by very small ocean-going craft.

Chart C gives cognate percentage figures for a list of 96 of the 100 lexical items among the three Gizra villages. Chart D gives the number of words out of 100 that are identical. Words were counted as identical if the only difference was between hard-to-distinguish vowels such as ə and ʌ, where the difference may be due to a different elicitor. Gizra vocabulary lists are included in Appendix B.

CHART C: GIZRA COGNATE PERCENTAGES

Waidoro			
95	Kupere		
96	97	Togo	

CHART D: GIZRA IDENTICAL WORD PERCENTAGES

Waidoro			
67	Kupere		
71	74	Togo	

These scores show that while the three Gizra villages probably speak separate dialects, they are closely inter-related. Kupere and Togo, the smaller two villages, are most closely related.

5. DETAILS ON THE GIDRA LANGUAGE

Gidra is spoken by approximately 1800 people. The majority of these live in fourteen villages. Dorogori (old Mauwoto), Abam, Peawa-Woigi, and Zim are located along the Oriomo River. Ume is on the Binaturi River and Kuru on its tributary. Wonie, Iamega, Podari, and Wipim are connected by a car road. Gamaewe moved recently to a location nearer other Gidra villages, the road, and the Wipim school. Rual and Kapal are located south of the Bituri River. They are in part Mutum speaking. Iamega and Wipim are in part Agöb speaking. Guiam and Yuta are the names of two villages that have moved together to form Tapila, a new village located on the Fly River at the mouth of the Bituri River. There are also Gidra speakers living in Daru.

Other names such as Kopiang, Dorgel, and Me'ai were given as Gidra old village names, but these places were not visited and no speakers could be found elsewhere. Two individuals stated that Me'ai people live in several coastal Kiwai villages, keeping gardens at their old village site. This information was not verified. Kedäreiam was given as the name of a Gidra village that has now been abandoned. Also, Buza was given as the old village name from which the Gidra speakers in Wipim have come.

Vocabulary lists under fourteen village names are found in Appendix C. There is no list for Rual. Both Guiam and Yuta are represented, thus making fourteen names.

Chart E gives cognate percentage figures for a list of 100 lexical items. The lists for Yuta and Guiam, collected by a colleague, have less than 100 words that can be compared with other Gidra lists. Also, the lists for Wonie and Podari were short for some comparisons. One percentage point was subtracted from each percentage score where ten items were missing. The Yuta scores lost two points. It is possible that a longer list of words would raise these scores. Both the original and the adjusted scores are given. The adjusted score is given first; the original is the one in parentheses. In every case the number of cognates was divided by the number of words available for that comparison.

Adjusting four of these scores, brings them to below the 81% cognate criteria given for dialects within a language. This makes a total of sixteen out of the 91 scores below the 81% mark. However, no village is below 81% with every other village, and by a chain of linkage between those that are above 81%, all are dialects of the Gidra language.

The Gidra villages may be divided into two groups: The southern villages are the first five listed on Chart E: Ume, Kuru, Dorogori,

Abam, and Peawa. The northern villages include Podari, Iamega, Kapal, Wonie, Gamaewe, Zim, Wipim, Guiam and Yuta.

The lowest scores are those linking the northern and southern villages. These are found within the box on the chart. Yuta and Guiam, representing the most distant scores, are also the most geographically distant. Abam's scores are also low, especially 78% with Wipim.

The southern villages are closely related by scores ranging from 95-99%. These scores are high enough to investigate whether each village is a separate dialect. Kuru and Dorogori have 62% of their words identical, as do Kuru and Ume. Dorogori and Ume share 55, and Dorogori and Abam share 56. These seem too few to call any two villages one dialect.

The northern villages of Iamega, Kapal, and Podari are also closely related by scores of 96-98%. The numbers of identical words in 100 for these villages ranges from 60 to 69. Again, these seem too few to unite the villages into one dialect.

The highest scores linking the southern villages with the northern villages are 91% linking Ume with Wonie and Gamaewe; and 90% linking Kuru with Zim, Wonie, and Gamaewe. These villages are geographically close also.

Yuta and Guiam speakers now live together in one village called Tapila, yet their dialects are only 79-81% cognate. It would be interesting to see how much this cognate count increases in the next few years.

6. PHONOLOGICAL COMPARISONS

6.1. BINE

The words in Chart F were chosen to demonstrate the phonological changes from dialect to dialect. The chart presents examples of words that change from village to village.

Glottal stop is not a phoneme in Irupi-Drageli, Sebe, or Sogal dialects. These dialects use /k/ in place of glottal stop. Conversely, there is no /k/ in the Masingle dialect. Often glottal stop is substituted for the /k/ of other dialects. Kunini, Täti, and Giringarede-Boze have both glottal and /k/ phonemes.

CHART E: GIDRA COGNATE PERCENTAGES

	Yut	Gui	Wip	Kap	Iam	Pod	Zim	Gam	Won	Pea	Aba	Dor	Kur	Ume
Ume	74 (76)	78 (79)	86	86	86	87	89	91	91	95	95	98	99	
Kuru	74 (76)	81 (82)	86	86	86	88	90	90	90	95	95	99		
Dorogori	74 (76)	77 (78)	84	84	84	85	85	89	89	96	97			
Abam	73 (75)	76 (77)	78	80	81	81	80	83	87 (88)	96				
Peawa	76 (78)	77 (78)	82	81	82	82 (83)	87	84	86 (87)					
Wonie	79 (81)	86 (87)	89 (90)	93	92 (93)	91 (92)	90 (91)	95						
Gamaewe	80 (82)	83 (84)	92	90	90	89	94							
Zim	93 (85)	96 (87)	93	93	93	91 (92)								
Podari	79 (81)	90 (91)	92 (93)	98	97									
Iamega	79 (81)	91 (91)	95	96										
Kapal	79 (81)	91 (92)	95											
Wipim	81 (83)	87 (88)												
Guiam	79 (81)													
Yuta														

Note: The bracketed figures show the scores before adjustment.

CHART F: BINE PHONOLOGICAL VARIANCE

		<i>dog</i>	<i>what</i>	<i>tomorrow</i>	<i>coconut</i>
a.	Boze Giringarede	dřengo	ɲena	?iye?iye	i:ya
b.	Kunini	dřego	ɲena	?iye?iye	i:ya
c.	Masingle	dřego	ɲena	?iye?iye	i:ya
d.	Irupi Drageli	dřengo	ɲena	kiyekie	i:ya
e.	Täti	dřengo	ɲena	?iye?iye	i:ya
f.	Sebe	dřengo	ɲena	kiyekie	i:ya
g.	Sogal (Glabi)	dřengo	ɲena	kiyekie	i:ya

(continued overleaf)

	<i>garden</i>	<i>not</i>	<i>I</i>	<i>nose</i>	<i>he</i>	<i>skin</i>	<i>pig</i>
a.	?alwa?upi	gi?a	?ano	keke	tambo	tæ:po	blomo
b.	?alwa?upi	li?a	?ane	keke	tabe	tæ:pe	blome
c.	?alwa?upi	le?a	?ane	?e?e	tabe	tɑ:pe	blome
d.	karuwakupi	řika	kane	keke	tambe	tɑ:pe	břome
e.	?ulwa?upi'	lu?a	?ane	keke	tabwe	tæ:pwe	blomwe
f.	kalwakupi	lika	kane	keke	tambo	tæ:po	blomo
g.	kalwakupi	lika	kane	keke	tambo	tæ:po	blomo

	<i>sun</i>	<i>he dances</i>	<i>root</i>	<i>good</i>	<i>he catches</i>
a.	bimu	gi:ře dowædinige	břando	mi:ndži	džo:mlenige
b.	bimu	gi:ře džewædženige	břadžu	mi:dži	džo:mlenige
c.	abedži	gi:ře dowædenige	mřado	mi:ndži	do:mlenige
d.	abedži	gi:ře dowædenige	mařando	mi:ndži	do:mnenige
e.	abwedži	gi:ře dewædinige	břando	mi:zi	do:mlenige
f.	abudži	gi:ře dowædinige	břando	mi:ndži	džo:mnenige
g.	bimu	gi:ře dowædinige	břando	mi:ndži	džo:mlenige

	<i>afternoon</i>	<i>paddle</i>	<i>frog</i>	<i>this</i>	<i>that</i>	<i>he runs</i>
a.	mæmle	æibi	po:gæ	andi	pende	o:waminige
b.	mæmle	æibi	po:gæ	ai	pei	u:wamenige
c.	mæmle	aibi	po:ga	adi	pede	u:waminige
d.	menæmene	aibi	po:ge	andi	pendi	u:wamenige
e.	mæmne	æibi	po:gæ	ada	pede	o:aminige
f.	mæmne	aibi	po:gæ	andi	pende	o:waminige
g.	mæmne	aibi	po:gæ	andi	pende	o:waminige

	<i>basket</i>	<i>beach</i>	<i>bird</i>	<i>feather</i>
a.	di:mba	mařu	eře	ŋæři
b.	di:ba	malu	ele	ŋæli
c.	di:ba	mařu	eře	ŋɑři
d.	gusa	malu	ele	ŋali
e.	di:ba	mařu	eře	ŋæři
f.	di:ba	malu	eře	ŋæli
g.	di:mba	mařu	eře	ŋæři

Four dialects have pre-nasalised voiced stops word medially. The Tāti dialect has labialised bilabial nasals and stops word medially.

All dialects have both /d/ and /dž/ phonemes. In the Tati dialect the /dž/ is rare, and in the Kunini dialect the /dž/ is most frequent, often substituting for the /d/ of other dialects. Also, the /l/ and /ř/ are present in all, however, one dialect shows a preference for /l/ and another shows a preference for /ř/.

Masingle and Irupi-Dragei dialects have no /æ/, always substituting the lower /a/ for /æ/.

Beyond these generalisations, it is difficult to say, for instance, that a dialect will follow the neighbouring dialects in using /æ/ rather than /a/ in a particular word. It may, or again it may not. Bine dialects tend to resist grouping.

6.2. GIDRA

The six words in Chart G were chosen to demonstrate some phonological changes among the dialects of Gidra. A list of six words can demonstrate only a few such changes, yet these few reveal a pattern.

CHART G: GIDRA PHONOLOGICAL VARIANCE

	<i>good</i>	<i>tongue</i>	<i>liver</i>	<i>dies</i>	<i>drink</i>	<i>meat</i>
Ume	wogle	vlat	værom	wudže	yonar	mər
Kuru	wogəl	vlat	værom	wudže	yanai	mər
Dorogori	wɔgɪ	vlat	vurum	wudžɪt	ɔnar	mɪr
Abam	wɔgɪl	ɸlat	tsɪkɪp	wudž	ɪnar	mər
Peawa	bɔgle	vlat	værom	udž	yonar	mɪr
Wonie	bɔgle	weat	səkəp	wudž	yonai	mɪr
Gamaewe	wogəl	weyat	wurom	widže	yonai	mə
Zim	wɔgɪl	vɛat	vurom	udže	yonar	mər
Podari	bogle	weat	wurɔm	udže	yonai	mɪ
Iamega	bogəl	weat	sukəp	udž	yenae	mə
Kapal	bogəl	weyat	wurom	udžawin	yanai	mə
Wipim	bɔgle	weat	wurɔm	udže	yanai	
Guam	bokɛl	yat	sukup	udže	yonai	
Yuta	bokol	weate			yonai	

The first four words show word initial substitutions for /w/. All dialects have a /w/ phoneme. The dialects again fall into a southern group and a northern group. In the words for *good* and *dies* the southern dialects begin with a /w/ while the northern dialects substitute /b/ or omit the initial consonant. In the words for *tongue* and *liver* the northern dialects begin with /w/ and the southern dialects substitute /v/ or /vl/.

The last two words show word final consonant /r/ for the southern dialects, while the word final consonant is omitted by the northern dialects.

There are exceptions to these groupings, and villages bordering on both groups, such as Zim and Kuru, do not consistently follow one group. Even with these exceptions, however, the two groupings can be seen.

7. CONCLUSIONS

Chart H contains the same five words in each Gidra dialect. It is given as one more example of how the Gidra villages divide themselves into a southern group and a northern group. The northern group is the more loosely knit. It also covers a larger area geographically. Kuru is geographically on the border between the two groups, as its use of both words for *leg* and *heart* would indicate.

CHART H: GIDRA LEXICAL VARIANCE

	<i>leg</i>	<i>heart</i>	<i>hair</i>	<i>bird</i>	<i>dog</i>
Ume	kwau	tən	ŋə:s	yi	yɔŋk
Kuru	kwau/pis	kəd/təñ	ŋəs	yi	yɔŋg
Dorogori	kwa	tən	ŋis	yi	yɔŋg
Abam	kwa	tən	ŋə:s	yi	yɔŋk
Peawa	kwao	tun	ŋə:s	yi	yɔ:rɪnk
Wonie	pɪ:s	kɪd	ŋəi	ŋɛna	yɔŋg
Gamaewe	pəs	kɪd	ŋəy	ŋɛna	yɔŋg
Zim	pɪtʃ	kɪd	ŋəy	ŋɛna	yɔŋg
Podari	pɪs	kɪd	ŋei	ŋɛna	yɔŋg
Iamega	pəs	kɪ:d	ŋəy	ŋɛna	yɔŋg
Kapal	pəs	kəd	ŋəya	ŋɛna	yɔŋg
Wipim	pɔs	kə:d	nei	ŋʲɛna	yɔŋk
Guam	pus	kud	ŋne	ŋɛnʌ	yɔŋg
Yuta	pekagʌ	kudʌ	ne	ŋɛna	yɔŋgʌ

No two Gidra villages were closely enough related to be considered one dialect.

Conversely, the nine Bine villages group themselves into seven dialects: Boze-Giringarede, Irupi-Dragei, Sebe, Sogal, Masingle, Kunini, and Täti.

Also, the Bine villages cannot be grouped easily into two groups. Chart A shows that Täti's scores have a remarkably narrow range - from 87-90%. Täti's scores are neither very high nor very low with any other village. Geographically, Täti is located in the centre of all the villages. Thus, Täti is the most central Bine dialect.

APPENDIX A

BINE WORD LISTS

	<i>*all</i>	<i>arm</i>	<i>arrow</i>	<i>*ashes</i>
a. Kunini	ieta	ime	?osi/bi:gu	mři:be
b. Sebe	is:e:ta	imo	bi:gu	bulu
c. Irupi	ieta	ime	bali	při:be
d. Masingle	ieteta	ime	?ose	miřbe
e. Tätti	?amla?amle	imwe	?ose	tuwe/bula
f. Drageli	iyela	ime	bali	bulu
g. Sogal	ieta	imo	kose	tuwo
h. Giringarede	iyeta	ime	?ose	tuwo
i. Boze	iyeta	ime	?ose	tuwo/miřbe
<i>*bark</i>	<i>*belly</i>	<i>*big</i>	<i>*bird</i>	<i>*bite</i>
a. uli tæ:pe	amuge	babo/mage	ele	nægutenige
b. uli tæ:po	kamuge	babo/mage	eře	—
c. uli ta:pe	kame	uduba	ele	—
d. uli ta:pa	?amuge	uduba	eře	nagutenige
e. uli tæ:pwe	amuge	babo	eře	—
f. uli tape	kamuge	uduba/babe	ele	nagyutanenige
g. uli tæ:po	kamuge	babo/mago	eře	nægutenige
h. uli tæ:pe	?amugo	babo/mago	eře	nægutenige
i. uli tæ:pe	?amo	mago/babo	eře	nægutenige
<i>*black</i>	<i>*blood</i>	<i>*bone</i>	<i>*breast</i>	<i>*burn</i>
a. ?æsæ?æsæ	u:di	ka:ke	ɲame	ayenige
b. kiřiakiřia	u:di	ka:ke	ɲamo	embonige
c. kiřiakiřia	u:di	ka:ke	ɲame	akřenige
d. ?agu?aga	u:di	?a:?e	ɲame	abnenige
e. usi ta:to	u:di	ka:ke	nono	de?wenige
f. kiřiakiřia	u:di	Ka:ke	ɲame	dekwanenige
g. sisisisi	u:di	ka:ko	ɲamo	ayenige
h. ?æsæ?æsæ	u:di	ka:ko	ɲamo	aiyonige
i. ?æsæ?æsæ	u:di	ka:ko	ɲamo	aiyonige

	<i>*claw</i>	<i>*cloud</i>	<i>*cold</i>	<i>*come</i>	<i>*dies</i>
a.	gařgale	ařbe	gæbu	tædenige	budře gye
b.	kuse ka:ke	—	gæbu	teteřinige	budřo geye
c.	gařegaře	dume	gabū	teteřinige	budře geye
d.	kukluta	ařbe	yagle	tadenige	budře geye
e.	kukluta	ařbwe	gæbu	opwenige	budře geye
f.	řuwa kaake	dume	yage	teteřanenige	budře geye
g.	gařgale	—	gæbu	teteřinige	budřege
h.	gaba?o	ařbo	gæbu	teteřinige	budřo gye
i.	gaba?o	ařbo	gæbu	teteřinige	budřo gye
	<i>*dog</i>	<i>*drink</i>	<i>*dry</i>	<i>*ear</i>	<i>*eat</i>
a.	dřego	enenige	tu:e	tablame	eřwenige
b.	dřengo	enenige	ařeře	tablame	—
c.	dřengo	enenige	ma:nde	tablame	—
d.	dřego	enanige	apetni	tablame	—
e.	dřego	enenige	ma:de	tablam	—
f.	dřengo	enanenige	apetni	ta'blame	—
g.	dřengo	enenige	ma:nde	tablamo	—
h.	dřengo	enenige	tu:o	tablamo	eřwenige
i.	dřengo	enenige	tu:o	tablamo	eřwadinige
		<i>*egg</i>	<i>*eye</i>	<i>*fat</i>	<i>*feather</i>
a.	Kunini	ku	iře?u	toře	ele ŋæli
b.	Sebe	ku	iřeku	toře	eře ŋæři
c.	Irupi	ku	iřeku	toře	ele ŋæli
d.	Masingle	?u	iře?u	toře	eře ŋaři
e.	Täti	ku	iře?u	toře	eře ŋæři
f.	Drageli	ku	iřeku	toře	ele ŋali
g.	Sogal	ku	iřeku	toře	eře ŋæři
h.	Giringarede	ku	iře?u	tořo	eře ŋæři
i.	Boze	ku	iře?u	tořo	eře ŋæři
	<i>*fire</i>	<i>*fish</i>	<i>*flies</i>	<i>full</i>	
a.	muye/uliobo	?ibu/upya	u:dženige	tapanige	
b.	ulikobo	kopæi/kibu	u:denige	tapanige	
c.	uřikobe	kopae/kibu	u:ndenige	pu:we geiye	
d.	olobe	?ibu	u:denige	tapanige	
e.	ulobo	?upya/?ibu	u:denige	tapanige	
f.	ulikobe	kopae/kibu	undanenige	pu:we geye	
g.	ulikobo	kupya/?ibu	u:ndenige	apanæ:ndede	
h.	uliobo	?upya/?ibu	u:ndonige	apanænede	
i.	uliobo	?upya/?ibu	undonige	apanænede	

	<i>*give</i>	<i>*good</i>	<i>*green</i>	<i>ground</i>	<i>*hair</i>
a.	næʔæʔenige	mi:dʒi	—	gawe	edi ŋæli
b.	—	mi:ndʒi	—	gawo	ŋæʔi
c.	—	mi:ndʒi	—	gawe	ede ŋali
d.	—	mi:ndʒi	—	gawe	ede ŋali
e.	—	mi:zi	—	gawe	ede ŋæʔi
f.	nakaʔinige	mi:ndʒi	—	gaʔwe	edi ŋali
g.	—	mi:ndʒi	—	gawo	mopo ŋæʔi
h.	næʔæʔinige	mi:ndʒi	—	gawo	ede ŋæʔi
i.	—	mi:ndʒi	—	gawo	ede ŋæʔi
	<i>he catches</i>	<i>he coughs</i>		<i>he dances</i>	
a.	dʒomlenige	koklamu gyene		gi:re dʒewædzenige	
b.	dromnenige	kokʔamu geye		gi:re dewædinige	
c.	domenenige	kloklamu geye		gi:re dowadenige	
d.	domlenige	oʔʔamu geye		gi:ʔe dowadenige	
e.	do:mlenige	kokʔamu geye		gi:ʔe dewædinige	
f.	do:mnenige	kloklamu geye		gi:ʔe dowadenige	
g.	dʒomlengie	kokʔamuge		gi:ʔe dowædinige	
h.	dʒomlenige	kokʔamugyene		gi:ʔe dewædinige	
i.	dʒomlenige	kokʔamu gyene		gi:ʔe dewædinige	
	<i>he falls down</i>	<i>he laughs</i>		<i>he runs</i>	
a.	sitʔamenige	ŋaŋe o:panenige		u:wamenige	
b.	sitʔaminige	ŋaŋe æbitinige		o:waminige	
c.	sitʔamenige	ŋaŋe geye		u:wamenige	
d.	sitʔaminige	ŋaŋa umanenige		u:waminige	
e.	sitʔaminige	naŋe opnenige		o:aminige	
f.	bitʔamige/bekiʔige	ŋaŋe geye		u:wemanige	
g.	itʔaminige	ŋaŋo o:paninige		o:waminige	
h.	sitʔamige	ŋaŋo o:paninige		o:waminige	
i.	sitʔaminige	ŋaŋo o:paninige		o:waminige	
	<i>*head</i>	<i>*hear</i>	<i>*heart</i>	<i>heavy</i>	<i>*horn</i>
a.	mope	næteʔidʒenige	ŋeneʔu	mæpu	glola/ga:le
b.	mopo	natekindenige	ŋeneku	mæpu	ga:le
c.	mope	intekindenige	ŋeneku	mapu	ga:le
d.	mope	nateʔidenige	ŋeneʔu	mapu	glola/ga:le
e.	mopo	næ:teʔidige	ŋeneʔu	mæpu	ga:le
f.	mope	natekindenige	ŋeneku	mapu	ga:ʔe
g.	mopo	kindenige	ŋeneku	mæpu	ga:le
h.	mopo	næteʔindenige	ŋeneʔu	mæpu	ga:le
i.	mopo	næteʔindenige	ŋeneʔu	mæpu	ga:le

	<i>hot</i>	<i>house</i>	<i>*I</i>	<i>*kills</i>
a. Kunini	nu:nu	mete	?ane	eglenige
b. Sebe	nu:nu	mete	kane	eglenige
c. Irupi	nu:nu	mete	kane	egřenige
d. Masingle	nu:nu	mete	?ane	eglenige
e. Täti	nu:nu	mete	?ane	eglenige
f. Drageli	nu:nu	mete	kane	egřanenige
g. Sogal	nu:nu	mete	kane	eglenige
h. Giringarede	nu:nu	mete	?ano	eglenige
i. Boze	nu:nu	mete	?ano	eglenige
<i>*knee</i>	<i>*knows</i>	<i>*leaf</i>	<i>leg</i>	
a. koko řa:ře	umle gyene	la:mo	eřņe	
b. koko řa:ře	umle geye	la:mo	eřņe	
c. koko ka:ke	umře geye	řa:mo	eřņe	
d. ?o?ořa:ře	umle geye	la:me	eřņe	
e. koko řa:ře	umle ge	la:mwe	eřņe	
f. koko ka:ke	umle ge	řa?me	eřņe	
g. koko ka:ko	umle ge	la:mo	eřņe	
h. koko řa:řo	umlo gye	la:mo	eřņe	
i. kokořa:řo	umlo gye	la:mo	eřņe	
<i>*lie down</i>	<i>*liver</i>	<i>*long</i>	<i>*louse</i>	
a. gudadaře/ætweitenige ogřenenige	owela:me	lealea	ņame	
b. opaře oğřenige	owola:mo	suřusuřu	ņamo	
c. oğřenige	uweřa:me	suřusuřu	ņame	
d. oğřenige	owala:me	suřusuřu	ņame	
e. ætweitenige	owela:mo	suřusuřu	ņamwe	
f. ire kařte	uweřa:me	suřusuřu	ņa'me	
g. ætwi:tinige	owola:mo	suřusuřu	ņamo	
h. æwitinige	owola:mo	lealea	ņamo	
i. æwitinige	owola:mo	lealea	ņamo	
<i>*man</i>	<i>*many</i>	<i>*meat</i>	<i>*moon</i>	<i>*mountain</i>
a. řo:řie	bu?u	?ibu mædžu	mabye	podo/dořo
b. řo:řie	buku	mædu	břepo	podo/dořo
c. lo:ři	buku	mađu	mřepe	podo
d. řo:řie	bu?u	mađu	meřpe	podo
e. řo:řie	bu?u třage	?ibu mædu	mře:pwe	podo/dořo
f. lo:ři	kuku dřage	kibu mađu	mřepe	podo
g. řo:řie	lolwo	kibu/mædu	mabye	dořo/podo
h. řo:řie	bu?u/řago	mædu	mabye	dořo/podo
i. řo:řie	bu?u/řago	mædu	mabye	dořo/podo

	<i>*mouth</i>	<i>*name</i>	<i>*neck</i>	<i>*new</i>	<i>*night</i>
a.	tage	ŋi	siŋi ʔaʔe	kiʃeʔe	ʔiye
b.	tage	ŋi	kande ka:ko	mamye	kiye
c.	tage	ŋi	kande ka:ke	mamye	kiye
d.	tage	ŋi	adaʔe	ʔiʃeni	ʔiye
e.	tage	ŋi	ada	mamie	ʔiye
f.	ta>ge	ŋi	ka>nde ka>:ke	mamye/kaʃte	kiye
g.	tago	ŋi	kande ka:ko	mamye	kiye
h.	tago	ŋi	siŋiʔaʔo/andaʔo	kiʃeʔe	ʔiye
i.	tago	ŋi	—	kiʃeʔe	ʔiye

	<i>*nose</i>	<i>*not</i>	<i>*one</i>	<i>path</i>	<i>*person</i>	<i>*rain</i>
a.	keke	liʔa	yepə	ga:be	biname	ŋupe
b.	keke	lika	ne:teʃa	ga:bo	binamo	ŋupo
c.	keke	ʃika	ne:teʃa	ga:be	biname	ŋupe
d.	ʔeʔe	leʔa	ne:to	ga:be	biname	ŋupe
e.	keke	luʔa	ne:teʃa	ga:bwe	binam	ŋupwe
f.	keke	ʃika	ne:teʃa	ga>be	biname	ŋupe
g.	keke	lika	yepə	ga:bo	bimamo	ŋupo
h.	keke	giʔa	yepə	ga:bo	binamo	ŋupo
i.	keke	giʔa	yepə	ga:bo	binamo	ŋupo

	<i>*red</i>	<i>*root</i>	<i>*round</i>
a. Kunini	u:di/ududi	bʁədʒu	pa:pita
b. Sebe	u:di	bʁando	—
c. Irupi	udui	maʁando	awagʁoma/ka:le
d. Masingle	ʔobeʔobe	mʁando	ʔa:le
e. Täti	ududi	bʁando	lubu
f. Drageli	udu-udi	mʁando	ka:le
g. Sogal	u:diu:di	bʁando	tipaku
h. Giringarede	ududi	bʁəndo	pa:peta
i. Boze	ududi	bʁəndo	pa:peta

	<i>*sand</i>	<i>*see</i>	<i>*seed</i>	<i>short</i>
a.	koʃio/seʔʃe	dʒep nenige	ku	tu:be
b.	sekʃe	—	ku	tubu
c.	wieʃe	—	ku	tumbe
d.	tuwe	—	ʔu	tube
e.	koʃio/tuwe	iʃe gie	ku	tubu tubu
f.	wieʃe	depənenige	ku	tugi/tumbe
g.	koʃio	—	ku	tubu kæli
h.	koʃio	depəninige	ku	tumbo kæli
i.	koʃio	depəninige	ku	tumbo kæli

	<i>*sit</i>	<i>*skin</i>	<i>*sleep</i>	<i>*small</i>		
a.	adnatenige	tæ:pe	ute gyene	matikolæ		
b.	adnatenige	tæ:po	ute geye	matikolæ		
c.	adnatenige	tɑ:pe	ute geye	matikaři		
d.	adnatenige	ta pe	ute geye	matikola		
e.	adnatenige	tæ:pwe	ute geye/ogřenige	matikola		
f.	adnatenige	tɑ:pe	ute ge	geglo/matikaři		
g.	adnatenige	tæ:po	ute ge/ogřenige	matikæli		
h.	adnatenige	tæ:pe	uto gye	matikæli		
i.	adnatenige	tæ:pe	uto gye	matikæli		
	<i>*smoke</i>	<i>speak</i>	<i>*stand</i>	<i>*star</i>		
a.	kloka/kokla	džedženige	abudžæn̩tenige	wale		
b.	kokla	dedenige	adæn̩tenige	gugie		
c.	křoka	dedenige	adaæn̩tenige	gřiga		
d.	loʔa	dedenige	i:řemitenige	wale		
e.	kloka	ditřanenige	imyemutenige	wale		
f.	křoka	dika ʔnenige	adaæn̩tenige	gřiga		
g.	kloka	džikenige	uřkemutenige	wale		
h.	kloka	džiʔenige	abodæn̩tinige	walo		
i.	kloka	džiʔenige	adobæn̩tinige	wale		
	<i>*stone</i>	<i>*sun</i>	<i>*swim</i>	<i>*tail</i>		
a.	kula	bimu	atwaæn̩nige	ki:řa		
b.	kula	abudži	atwaæn̩nige	ki:řa		
c.	kuřa	abedži	atwaæn̩nige	ki:řa		
d.	kula	abedži	atwaæn̩nige	třa:ŋe		
e.	kula	abwedži	atwaæn̩nige	ki:řa/třa:ŋe		
f.	kuřa	abezi/abedži	atwaæn̩nige	ki:řaʔ		
g.	kula	bimu	—	ki:řa		
h.	kula	bimu	—	ki:řa		
i.	kula	bimu	—	ki:řa		
	<i>*that</i>	<i>*this</i>	<i>*tongue</i>	<i>*tooth</i>	<i>*tree</i>	<i>*two</i>
a.	pei	ai	wætæ	giřuʔu	uli	neneni
b.	pende	anda	wætæ	giřiku	uli	neneni
c.	pendi	andi	wařta	giřiku	uři	neneni
d.	pede	adi	wate	giřuʔu	uli	ne:no
e.	pede	ada	wætæ	giřiʔu	uli	neneni
f.	pendi	andi	wařta	giřiku	uli	neneni
g.	pende	andi	wærtæ	giřiku	uli	neneni
h.	pende	andi	wætæ	giřuʔu	uli	neneni
i.	pende	andi	wætæ	giřuʔu	uli	neneni

	<i>*walk</i>	<i>*water</i>	<i>*we (excl.)</i>
a. Kunini	ædenige	ni:ye	?ine
b. Sebe	deteřinige	ni:ye	kine
c. Irupi	deteřinige	ni:ye	kine
d. Masingle	adenige	ni:ye	?ine
e. Tăti	ædenige	ni:ye	?ine
f. Drageli	deteřenige	ni:ye	kine
g. Sogal	deteřinige	ni:ye	kine
h. Giringarede	deteřinige	niye	?ine
i. Boze	deteřinige	niye	?ine

	<i>wet</i>	<i>*what</i>	<i>*white</i>	<i>*who</i>	<i>wind</i>
a. nebonebo		gena	bulubulu	la:ti	buwe
b. bæřdæ		gena	bulubulu	la:te	buwo
c. mandamanda		gena	buřubuřu	latetε	buwe
d. buda		gena	bulubulu	la:te	buwe
e. břædæ		gena	bulubulu	la:te	bu:we
f. mandamanda		gena	bulubulu	latetε	bu:we
g. bubobubo		gena	bulubulu	late	buwo
h. nebo		gena	bulubulu	la:to	buwo
i. nebo		gena	bulubulu	la:to	buwo

	<i>*woman</i>	<i>*yellow</i>	<i>yesterday</i>	<i>*you (sing.)</i>
a. magebi		mulimuli	biři?e	ma:ne
b. magobo		mulimuli	biřiike	ma:ne
c. magebi		muřimuři	biřikiye	ma:ne
d. magebe		mulimuli	biři?e	ma:ne
e. magebe		mulimuli	biři?ye	ma:ne
f. magebi		mulimuli	biřikiye	ma':ne
g. magobe		mulimuli	biřiike	ma:ne
h. magobe		mulimuli	biři?e	ma:no
i. magobe		mulimuli	biři?e	ma:no

BINE (additional 50 words)

	<i>afternoon</i>	<i>bad</i>	<i>bamboo</i>	<i>banana</i>	<i>basket</i>
a. mæmle		ni:a	wauře	do:bali	di:ba
b. mæmne		ni:a	wauře	do:bali	di:ba
c. mamne		ni:a	wauře	do:bali	gusa
d. mamle		ni:a	wauře	do:ba	di:ba
e. mæmne		ni:a	wauře	do:bali	di:ba
f. mnamne		ni:a	wauře	do:bali	gusa
g. mamne		ni:a	wauře	do:bali	di:mba
h. mæmle		ni:a	wauřo	doba!i	di:mba
i. mæmle		ni:a	wauřo	dobali	di:mba

	<i>beach</i>	<i>boy</i>	<i>canoe</i>	<i>cassowary</i>	
a.	malu	imæ bægřæ	po	wi:a	
b.	malu	ro:řie bəgræ	po	wi:a	
c.	malu	lo:ři bagřa	po	wi:a	
d.	mařu	im bagřa	po	wi:a	
e.	mařu	řo:řie bægřæ	po	wi:a	
f.	dodo/malu	lo:ři bagřa	po	wi:a	
g.	mařu dodo	řo:řie bægřæ	po	wi:a	
h.	mařu	imæ bægřæ	po	wi:a	
i.	mařu	řo:řie bægřæ	po	wi:a	
	<i>coconut palm</i>	<i>crab</i>	<i>crocodile</i>	<i>father</i>	<i>fishing net</i>
a.	i:a	na:ge	si:ble	babe	ti:te
b.	i:a	misæ	si:ble	babo	ti:te
c.	i:a gide	na:ŋe	si:ble	babe	ti:te
d.	i:ya	misa	si:ble	babe	ti:te
e.	i:ya	na:go	si:ble	babwe	ti:te
f.	i:ya	misa	si:ble	ba'be	ti:te
g.	i:a	na:ŋgo	si:ble	babo	ti:te
h.	i:ya	na:ŋgo	si:ble	babo	ti:te
i.	i:ya	na:ŋgo	si:ble	babo	ti:te
		<i>flying fox</i>	<i>frog</i>	<i>garden</i>	
a.	Kunini	bya?a	po:gæ	?alua?upi	
b.	Sebe	byaka	po:gæ	kaluakupi	
c.	Irupi	bya:ka	po:ge	kařuakupi	
d.	Masingle	byi?a	po:ga	?alua?upi	
e.	Täti	bya?a	po:gæ	?ulwa?upi	
f.	Drageli	byaka	po:ga	kalwakupi	
g.	Sogal	bya:ka	po:gæ	kalwakupi	
h.	Giringarede	bya?a	pogæ	?alwa?upi	
i.	Boze	bi?a	pogæ	?alwa?upi	
	<i>girl</i>	<i>grass skirt</i>	<i>he</i>	<i>knife</i>	
a.	ŋule bægřæ	ŋæsi	tabe	tuřikæ	
b.	ŋule bægřæ	ŋæsi	tambo	ike/tuři	
c.	ŋuře bagřa	ŋasi	tambe	tuři	
d.	ŋule bagřa	ŋasi	tabe	tuři	
e.	ŋule bægřæ	ŋæsi	tabwe	ike tuři	
f.	ŋuře bagřa	kewa ŋasi	tambe	tuři	
g.	ŋule bægřæ	ŋæsi	tambo	iketuri	
h.	ŋulo bægřæ	ŋæsi	tambo	iketuri/tuřikæ	
i.	ŋulo bægřæ	ŋæsi	tambo	iketuri/tuřikæ	

	<i>mat</i>	<i>morning</i>	<i>mosquito</i>	<i>mother</i>	<i>old</i>
a.	wa:ku	křoke	bægi	mage	sasa
b.	dogo	yage	bægi	mago	sasa
c.	dogo	yagewale	bagi	mage	sasa
d.	tutřa	lo?we	bagi	mage	sasa
e.	wa:ku	yage ř'e?a	bægi	mage	sasa
f.	kapa	yagewale	bagi	ma'ge	sasa
g.	wa:ku	yago	bægi	mago	sasa
h.	wa:ku	křoko	bægi	mago	sasa
i.	wa:ku	křoko	bægi	mago	sasa
	<i>older brother</i>	<i>paddle</i>	<i>pawpaw</i>	<i>pig</i>	<i>rat</i>
a.	na:ne	æibi	mamyapa	blome	u:bi
b.	na:ne	aibi	kamiapo	blome	kubi
c.	na:ni	aibi	mamiape	břome	kubi
d.	na:ne	aibi	pamiapo	blome	?ubi
e.	na:ne	æibi	?uya	blomwe	ubi
f.	na:ni	aibi	mamiyape	blome	kubi
g.	na:ne	aibi	mamia:po	blomo	ki:namo
h.	na:ne	æibi	mamiapo	blomo	?ubi
i.	na:ne	æibi	mamiapo	blomo	?ubi
	<i>sago</i>	<i>sago thatch</i>	<i>sister</i>	<i>snake</i>	<i>stick</i>
a.	du	tune/tuna	ɲule	?obyame	suřu
b.	du	tuna	ɲule	kobyamo	suřu
c.	kando	tune	ɲuře	kobyame	suřu
d.	du/migi	tune	ɲule	?obyame	suřu
e.	du	tu:na	ɲule	?obyamo	suřu
f.	du	tune	ɲule	kobyame	suřu
g.	du	tunæ	ɲule	kobyame	suřu
h.	du	du tuna	ɲulo	?obiyamo	suřu
i.	du	du tuna	ɲulo	obi amo	suřu
	<i>sugar cane</i>	<i>swamp</i>	<i>sweet potato</i>	<i>taro</i>	<i>they</i>
a.	galwe	sawa	ubudžubudža	lo:lo	tepi
b.	gælwo	sauwa	na:ye:	lo:lo	tepe
c.	ga:řwe	sauwa	wombowombo	řo:ře	tepi
d.	galwe	sauwa	mobombo	aɲi:ri	tebe
e.	gælwe	sauwa	noři	lo:lo	tepe
f.	galwe	sawa	wombowombo	lo:lo	te:pi
g.	gælwo	sawa	ubudža	lo:lo	te:pe
h.	galwo	sawa	ubudžubudža	lo:lo	tepe
i.	galwo	sawa	ubudžubudža	lo:lo	tepe

	<i>three</i>	<i>tomorrow</i>	<i>turtle</i>
a. Kunini	nesae	?iye?iye	ga:me
b. Sebe	nesae	kiye kiye	ga:mo
c. Irupi	nasae	kiye kiye	ga:me
d. Masingle	nentu:tu:	?i:ye?i:ye	ga:me
e. Täti	nesae	?i:ye?i:ye	ga:me
f. Drageli	nasae	kiyekiyē	ga' mē
g. Sogal	nesa:e	kiyekiyē	ga:mo
h. Giringarede	nesayo	?iye?iye	ga:mo
i. Boze	nesayo	?iye?iye	ga:mo

	<i>vine</i>	<i>wallaby</i>	<i>when</i>	<i>wing</i>	<i>yes</i>
a. se:a	se:ba	liba	ta:me	yo	
b. se:a	se:ba	liba	ta:mo	yo	
c. se:a	ka:me	Ŷimba	ta:me	ya	
d. se:a	?a:me	liba	ta:ma	ya	
e. se:a	se:ba	liba	ta:mo	yo	
f. se:ase:a	ka:me	limba	ta':me/ka:ke	ya	
g. se:ase:a	se:ba	liba	ta:mo	yo	
h. se:a	se:ba	liba	ta:mo	yo	
i. se:a	se:ba	liba	ta:mo	yo	

	<i>*you (pl.)</i>
a. wene	
b. wene	
c. wane	
d. wene	
e. wene	
f. wa'ne	
g. wene	
h. wene	
i. wene	

NOTE to the material in Appendix A, B, and C: Almost all verb forms were elicited in third person singular. The English gloss for some words indicates this; for others it does not. In many instances the pronoun 'he' is included with the verb form. The Gizra pronoun is 'wa' and the Gidra pronoun is 'ton'.

APPENDIX B

GIZRA WORD LISTS

		<i>*all</i>	<i>arm</i>	<i>*ashes</i>	<i>*bark</i>	<i>*belly</i>	
a.	Waidoro	bilʌman	tʰaŋ	uʀpʰipʰupʰ	kuan	bikʰam	
b.	Kupere	blaman	tʰan	uʀpʰiph	kʷan	bikəm	
c.	Togo	biləman	tʰaŋ	uʀpʰiph	kʷan	bikəm	
		<i>*big</i>	<i>*bird</i>	<i>*bite</i>	<i>*black</i>	<i>*blood</i>	<i>*bone</i>
a.	wiři	phöyay	wa baləŋda	phug	əi	kʰus	
b.	wiři	phöyay	wa baləŋda	phug	əi	kʰus	
c.	wiři	phəyay	abaləŋda	phug	əe	kʰus	
		<i>*breast</i>	<i>*burn</i>	<i>*claw</i>	<i>*cloud</i>	<i>*cold</i>	
a.	ŋum		wa baybda	əziř	pulpul	gi:b	
b.	ŋiam		—	ʌziř	pulpul	gi:b	
c.	ŋɪam		wa baybda	—	pulpul	gi:b	
		<i>*come</i>	<i>*die</i>	<i>*dog</i>	<i>*drink</i>	<i>*dry</i>	
a.	wa tʰa:me		wa budɪla	umay	wa: ananda	mələga	
b.	wa tʰa:me		wa budɪlim	ume	wa: ananda	mələg	
c.	wa tʰa:me		wa budɪlim	umʌe	wa: ananda	mələg	
		<i>*ear</i>	<i>*eat</i>	<i>*egg</i>	<i>*eye</i>	<i>*fat</i>	
a.	gublaŋ		wa: aloda	uʀgupʰ	ɪlkʰəkʰip	olgol	
b.	gublam		wa: aloda	uʀgup	ɪlkʰəp	olgol	
c.	giɓlaŋ		wa: aloda	uʀgup	ɪlkʰipʰ	olgol	
		<i>*feather</i>	<i>*fire</i>	<i>*fish</i>	<i>*fly</i>	<i>full</i>	
a.	ŋun		u:ř	wapʰuy	wa ařmulda	i:b	
b.	ŋɪn		u:ř	wapʰi	wa busoda	buku	
c.	ŋɪn		u:ř	wapʰi	wa ařmurda	buku	
		<i>*give</i>	<i>*good</i>	<i>*green</i>	<i>ground</i>	<i>*hair</i>	
a.	wa agenda		mořoal	piesopai	tʰɪ:pʰ	eřŋən	
b.	wa giɓlda		mořoal	piesopai	tʰɪ:p	eřŋen	
c.	wa gəɓlda		mořoal	piesopai	tʰɪ:p	əřŋen	

		<i>*head</i>	<i>*hear</i>	<i>*heart</i>	<i>*horn</i>	
a.	Waidoro	siŋəl	wa aĩkuřuda	mop ^h ok ^h əp ^h	ga:ř	
b.	Kupere	siŋɪl	wa aĩkuřuda	mop ^h ok ^h ɪp ^h	ga:ř	
c.	Togo	siŋɪl	wa aĩkuřuda	mop ^h ok ^h ɪp ^h	ga:ř	
	<i>hot</i>	<i>*I</i>	<i>*kill</i>	<i>*knee</i>	<i>*know</i>	
a.	uřuř	kʌt ^h ʌ	wa amk ^h alda	wagasinəl	wa um ^ə lda	
b.	uřuř	kəthə	wa amk ^h alda	wagusinɪl	wa um ^ə la	
c.	uřuř	kəth	wa amk ^h alda	wagəsinɪl	wa um ^ə la	
	<i>*leaf</i>		<i>leg</i>	<i>*lie down</i>	<i>*liver</i>	
a.	phəřgae/přanay		waphəř	—	k ^h onk ^h on puřinai	
b.	přəřgae		waphəř	—	—	
c.	phəřgae		waphəř	—	k ^h onk ^h on	
	<i>*long</i>	<i>*louse</i>	<i>*man</i>	<i>*many</i>	<i>*meat</i>	<i>*moon</i>
a.	k ^h ok ^h ořaph	ŋiəm	p ^h am	abun	mu:ř	melpal
b.	k ^h ok ^h ořaph	ŋəm	p ^h am	ʌbun	mu:ř	melpal
c.	k ^h ok ^h ořaph	ŋiəm	p ^h am	abɪn	mu:ř	melpal
	<i>*mountain</i>	<i>*mouth</i>	<i>*name</i>	<i>*neck</i>	<i>*new</i>	<i>*night</i>
a.	phodo	t ^h ae	ŋui	gepk ^h o	kəsɪl	iřib
b.	phodo	t ^h ai	ŋi	gəpk ^h o	kɪsɪl	iřub
c.	phodo	t ^h ae	ŋi	gepk ^h o	kɪsɪl	iřib
	<i>*nose</i>	<i>*not</i>	<i>*one</i>	<i>path</i>	<i>*person</i>	<i>*rain</i>
a.	siək ^h	k ^h ok ^h oe	dəřpha:n	k ^h uath	p ^h am	ŋup
b.	siək ^h	k ^h ok ^h e	dəřphan	k ^h wath	p ^h am	ŋup
c.	siək ^h	k ^h ok ^h e	dəřphan	k ^h wath	p ^h am	ŋup
	<i>*red</i>	<i>*root</i>	<i>*round</i>	<i>*sand</i>	<i>*see</i>	<i>*seed</i>
a.	aiai	sɪmkən	bumalək	nales	wa: esene	k ^h ɪ:p
b.	aiai	sɪmkɪn	—	nəřes	wa esene	k ^h ɪ:p
c.	ʌiʌi	sɪmkɪn	—	nəřes	wa esene	k ^h ɪ:p
	<i>*sit</i>	<i>*skin</i>	<i>*sleep</i>	<i>*small</i>	<i>*smoke</i>	
a.	wa məřanda	sopai	wa: u:dəta	k ^h aři	nokam	
b.	wa məřanda	sop ^h ai	wa ut ^ə da	k ^h aři	nokam	
c.	wa məřanda	sopae	wa ut ^ə da	k ^h aři	nokam	
	<i>speak</i>	<i>*stand</i>	<i>*star</i>	<i>*stone</i>	<i>*sun</i>	
a.	wa bəktanda	wa zam ^ə lda	wimuř	ɪŋlk ^h urp ^h	abɪs	
b.	wa bək ^h anda	wa dʒamalda	wimuř	ɪŋlk ^h up	əbɪs	
c.	wa bəkətanda	wa zamŋəlda	wimuř	ɪŋlk ^h ɪp	abɪs	

	<i>*swim</i>	<i>*tail</i>	<i>*that</i>	<i>*this</i>	<i>*tongue</i>	<i>*tooth</i>
a.	wa apəřda	u:p ^h	one	ini	ulit ^h	ziřgup
b.	wa ap řda	u:p ^h	ene	ini	u:lit ^h	ziřgup
c.	wa apəřda	u:p ^h	əne	ini	ulit ^h	ziřgɪp ^h
	<i>*tree</i>	<i>*two</i>	<i>*walk</i>	<i>*water</i>	<i>*we (excl.)</i>	<i>*we (incl.)</i>
a.	nugup	ni:s	wa t ^h ət ^h ədaise	naiy	k ^h i:	mi
b.	nugup	ni:s	wa agəlda	nai	k ^h i:	—
c.	nugup	ni:s	wa t ^h ət ^h əda	nae	k ^h i:	—
	<i>*what</i>	<i>*white</i>	<i>*who</i>	<i>*woman</i>	<i>*yellow</i>	
a.	la:řə	ŋařui	nət ^h ə	k ^h ol	i zaři	
b.	la:řə	ŋəři	nətə	k ^h o:l	t ^h ʌgali	
c.	la:řə	gabulpuli	nʌt ^h ə	k ^h o:l	ařĩřk ^h ip ^h	
	<i>*you (sing.)</i>					
a.	matʌ					
b.	matə					
c.	matə					

APPENDIX C

GIDRA WORD LISTS

	<i>*all</i>	<i>arm</i>	<i>*ashes</i>	<i>*bark</i>	
a. Ume	kom kisa/ieta	yam	—	gam	
b. Peawa	kom kisa	yam	zal bila	wul g'im	
c. Abam	i·tha	yam	zal kimba	gam	
d. Wipim	kom kesa	yam	wu:mbol	wu:l gam	
e. Guiam	komkesa	yam	wul rewaʔa	wul gam	
f. Yuta	—	yam	suŋaʔa	wul gʌndʒʌ	
g. Kapal	ieta/komkisa	yam	wulewaʔa	wul gam	
h. Gamaewe	iyeta	yam	wumbol	gam	
i. Kuru	khom kʰasa	yam	vivəl	wul gam	
j. Iamega	komkesa	yam	wumbol	wul gam	
k. Zim	kom kisa	ʔim	wumbol	wul gam	
l. Wonie	itha	yam	wumbol	g'im	
m. Podari	khomkhisa	yam	wumbol	—	
n. Dorogori	isətha	yam	wul vibəl	gam	
	<i>*belly</i>	<i>*big</i>	<i>*bird</i>	<i>*bites</i>	<i>*black</i>
a. kom	midžak	yi:	oŋoŋ	timitimi	
b. kom	midžak	yi	thon yɔʔəŋ	timtim	
c. köm	mi·džag	yi	khe: maŋ	timtim	
d. kom	ukoe	ŋyena	ɔ:ŋɔn	timtim	
e. kom	—	ŋena	ton yon	timtim	
f. khoma	kukuba	ŋena	—	timtim	
g. kom	midžakʰ	ŋena	toni yon kudž	timtim	
h. khom	ukoe	ŋena	yokas	timtim	
i. kom	midžag	yi	ton yɔŋ	timtim	
j. khom	ukoe	ŋena	thon yɔŋ	timtim	
k. kom	midžag	ŋena	ton ɔŋ	timtim	
l. khom	—	ŋena	yɔŋ	thimthim	
m. khom	—	ŋena	bəŋənəbəŋənə	thimthim	
n. khom	—	yi	yɔŋ	thimthim	

	<i>*blood</i>	<i>*bone</i>	<i>*breast</i>	<i>*burns</i>	<i>*claw</i>
a.	woi	kak	nom	paŋa yimbih	igut
b.	wodž	ka:k	nom	yimb	pitšgum
c.	wodž	kak	nom	wul yum	egith khakh
d.	kus	kak	nom	soyomai	idebe
e.	ku	kak	nom	wul yemb	—
f.	—	kagʌ	nom	wuwu	—
g.	kus	khak	nom	wul yamb	ekuŋuph
h.	wodž	khakh	nom	yamb	pu:zgup
i.	wodž	khak:h	nom	paŋat/yamb	egeth
j.	kus	khak:h	nom	wul yamb	iŋebe
k.	kus	khak:h	nom	vnam/wul yamb	ŋid
l.	wodž	khakh	nom	yam	phuskhakh
m.	khus	khakh	nom	yambənənən	iŋebe
n.	wɔ:dž	khakh	nom	yimbye	khakhakh

	<i>*cloud</i>	<i>*cold</i>	<i>*comes</i>	<i>*dies</i>
a.	rīm	gəbəl	ton ikhi	ton wudže
b.	wub	ŋəmla	thon i:kh	ton u:dž
c.	wubmoi	ŋəmla	thon ik	thon wudze
d.	ŋīm	gəbəl	i:k	keʔudže
e.	wub	gʌwəl	thon ekh	udze
f.	gəngʌl	gʌbəl	ekʌ	—
g.	wub	gəbəl	ton ik	ton udžawin
h.	ŋum	gəbəl	thon ekh	thon widže
i.	dumo	ŋəmla	thon i:k	thon wudž
j.	ŋum	gəbəl	thon i:kh	thon u:dž
k.	wubmoi	gəbəl	ton i:k	ke udže
l.	ŋīm	gibir	i:kh	wudž a:u
m.	ŋīm	gibil/ŋimbla	i:kh	udže
n.	dumo	ŋimbla	i:kh	wudžit yovin

	<i>*dog</i>	<i>*drink</i>	<i>*dry</i>
a. Ume	yong ^h	ton ni yonař	emi
b. Peawa	yo:rĩnk	thon my yo:nař	džomi
c. Abam	yong ^h	yi ^v nař	uřni
d. Wipim	yong	ton yənai	em
e. Guiam	yang	yonai	wemo
f. Yuta	yong ^Λ	yonai	kukokuko
g. Kapal	yong	ton yənai	uřni/em
h. Gamaewe	yong	thon yonai	em
i. Kuru	yong	yo:nai	em/uřnɔi
j. Iamega	yong	thon yənae	em
k. Zim	yong	yonař	džom
l. Wonie	yong	yonai	ε·m
m. Podari	yong	yonai	e:m
n. Dorogari	yong	ni yonař	emi:

	<i>*ear</i>	<i>*eat</i>	<i>*egg</i>	<i>*eye</i>
a. yakřom		ton aβin	kə:p ^h	ye:ř
b. yəřpya		thon ařvin	kə:p ^h	yəř kəp ^h
c. iřkəpia		thɔ [^] n wahɪŋ	kə:p ^h	yiř kəp ^h
d. yapyarom		ton awin	kə:p ^h	yuřtun
e. yeɸiya		yoen	k ^Λ p ^h h	yeř
f. y ^Λ p ^h ia		yoinya	aiya küp ^h Λ	y ^Λ ř ^Λ kap ^Λ
g. yəp ^h ya		ton awin	ŋena kəp ^h	yəř k ^Λ p ^h
h. yəkəpya		thon awĩn	kəp ^h	yəř tyəŋ
i. yək ^h əpya		thon yov	kəp ^h	yəř kəp ^h
j. yep ^v eařom		thon yowiñ	k ^h əp ^h	yər kəp
k. yəpyea		ton aviñ	kə:p	yər kəp
l. yeɸiařom		a:win	k ^h ɪp ^h	yər kəp
m. yəɸiařom		awi:n ^v a	k ^h ɪp ^h	yəř tuin
n. yəkəpya		nina wavwin	k ^h ɪp	yəř

	<i>*fat</i>	<i>*feather</i>	<i>*fire</i>	<i>*fish</i>	<i>*flies</i>
a.	gaeya	niz	wul pařa	ka:bum	wuvletš
b.	—	ŋəz	wul phařa	ka:bum	wuvřein
c.	gaia	ŋuz	wul phařa	kabim	khe wuvledž
d.	gaya	ŋöy	wul pəmban	kabum	ulis
e.	gaiya	—	wul poth	bořam	ke ulis
f.	—	ŋəiya	wüla	kabun	yekha
g.	gaya	ŋoi	wul	kabum	ton uřenən/ulis
h.	gaya	ŋəiy	pařa	kabum	bulis
i.	gaya	ŋəz	pha:řa	kabum	wuvlitš
j.	gaya	ŋəy	wul	kabum	thon ulis
k.	gaya	ŋĩy	wul pařa	khabum	ulitš
l.	gaia	ŋti	wul	khabum	bulis
m.	gaiya	ŋia	wul	khabum	uře nenən
n.	gaie	ŋəs	pařa	khabum	wuvlitš

	<i>full</i>	<i>*give</i>	<i>*good</i>	<i>*green</i>
a.	yəbthuth	m/nokwau	wogle	salsal
b.	yəvthəth	ton nukhav	bogle	gaugau
c.	yufthuth	ton n ki:wav	wogil	gaugau
d.	yənda:ŋəř	ton nokau	bogle	salsal
e.	okoumbař	nokau	bokel	saulsaul
f.	—	nukawe	bokol džag	—
g.	yəndaŋər	ton nokaw	bogəl	salsal
h.	yiwthĩth	thon noka ^u	wogəl	salsal
i.	yu:pthuth	thon yokwav	wogəl	salsal
j.	yənda:ŋər	thon yokau	bogəl	salsal/gaugau
k.	yəvtət	yokau	wogil	salsal
l.	—	nokha:u	bogle	salsal
m.	yidaŋiř	thonət no ^u ka ^u	bogle/səmnənə	salsal
n.	ut vani	mokwav	wogil/džog	salsal

		<i>ground</i>	<i>*hair</i>	<i>*head</i>
a.	Ume	ho:	mop ɲə:s	mop
b.	Peawa	vɔv	ɲə:s	mop
c.	Abam	vɔv	ɲə:s	mop
d.	Wipim	go	mop nei	mop tikəp
e.	Guia	ngo	map ^h ɲne	map ^h
f.	Yuta	—	mop ^h ne	mop ^h ʌ
g.	Kapal	gowa/go ^u	mop ^h ɲəya	mop ^h
h.	Gamaewe	go ^u	mop ɲəy	mop ^h
i.	Kuru	vɔv	mop ɲəs	mop ^h
j.	Iamega	go ^u	mop ^h ɲəy	mop ^h
k.	Zim	hov	mop ɲəy	mop
l.	Wonie	go ^u	mop ɲəi	mop ^h k ^h ak ^h
m.	Podari	go ^u	mop ɲəi	mop ^h
n.	Dorogari	go ^u	mop ɲis	mop ^h

	<i>*hear</i>	<i>*heart</i>	<i>*horn</i>	<i>hot</i>	<i>*I</i>
a.	ton mutkuŋ	tʉn	—	phaʃa	kon
b.	ton ətkeñdeñ	tʉŋ	tʃuwoɭ	paʃa	k ^h ɔn
c.	ton -uʃtkundʒ	t ^h ʉŋ	tʃəwoɭ	paʃa	kɔn
d.	utkundʒən	kə:d	dəŋ	p ^h emb	kɔ:n
e.	utkuidʒ	kud	—	p ^h emb	kon
f.	—	küda	—	pəmbe	k ^h onʌ
g.	ton utkundʒ	kəd	dəŋg	pemb	kon
h.	t ^h on uthkundʒ	kĩd	dəŋ	pe:mb	kɔ:n
i.	t ^h on utkundʒ	kəd/tuñ	dəŋ	phaʃa	kon
j.	t ^h on utkundein	kĩ:d	dəŋ	p ^h emb	kon
k.	mitkum	kĩd	dəŋ	pimb	kon
l.	u ^h th kundʒ	k ^h id	—	k ^h id	k ^h ɔn
m.	u ^h th k ^h undʒ	k ^h id	—	p ^h embə	k ^h ɔn
n.	ut k ^h undʒ	t ^h un	—	paʃapaʃa	k ^h ɔn

	<i>*kills</i>	<i>*knee</i>	<i>*knows</i>	<i>*leaf</i>
a.	ton yonandž	kum	ton wimře	řom
b.	ton yəṇandž	kumb	ton wumře	řom
c.	thon yonadž	kum kak	thon wumbře	wulə rom
d.	yɔṇa:ndž	kumɔp	uməřen	řom
e.	yonadž	kumop	umbřuře	řom
f.	—	kum kaga	—	—
g.	ton yunadž	kumop	thon wumaře	řom
h.	thon yonandž	khɪ/khɪror	thon wiməře	řom
i.	thon yonandž	kim	thon wuməře	řom
j.	thon yunandž	kumoph	ton wuməře	řom
k.	ton yunadž	kumop	ton umře	řom
l.	yonadž	khumoph	wuməře	řom
m.	uz khɔmə yonandž	khumoph	wumɪř	řoum
n.	yonandž	kum	wuwře thɔn	řom

	<i>leg</i>	<i>*lie down</i>	<i>*liver</i>	<i>*long</i>
a.	kwau	ton wenenwe	vuřom	pɪnpɪn
b.	kwao	—	vuřom	pɪnpɪn
c.	kwa	wəhənwehən	tʃɪkɪp	pən
d.	pös	ton yutunɪ	wuřom	pə:npə:n
e.	phus	man yuthuniai	sukuph	pənpen
f.	pe khaga	—	—	pənpan
g.	pəs	ton yutunɪ ainya	wuřom	pənpan
h.	phəs	yɪtɪŋɪ	wořom	phɪn
i.	kwau/pɪs	wa:wavaglidž	vuřom	pɪnpɪn
j.	phəs	thon yutunɪ aĩ	sukəp	pənpen
k.	pitš	yɪtunɪ	vuřom	—
l.	phɪ:s	yɪtunɪ a:u	səkəph	oba pɪn/oba wus
m.	phɪs	yɪthunɪ ainyə	wuřom	pɪnpɪn
n.	kwa	wahaglitš	vuřum	pɪnpɪn

		<i>*louse</i>	<i>*man</i>	<i>*many</i>	<i>*meat</i>
a.	Ume	bonəm	řəga	džok ^h džok ^h	məř
b.	Peawa	bənən	řəga	džokdžok	mĩř
c.	Abam	bɪnɪm	řəga	džogdžog	məř
d.	Wipim	bunəm	əřəga	džogdžog	—
e.	Guïam	—	ʌřʌgʌ	džagdžag	—
f.	Yuta	—	řuga	džagdžag	—
g.	Kapal	bənəm	řəka	džokdžok	mə
h.	Gamaewe	bonən	řəga	džokdžok	mə
i.	Kuru	bunəm	řə:ga	džokdžok	məř/kwadž
j.	Iamega	bənəm	řəga	džokdžok ^h	mə:
k.	Zim	bənəm	řəga	džokdžok	məř
l.	Wonie	bɪnɪm	řɪga	džogdžog	mɪ:ř
m.	Podari	bɪnɪm	řɪga	džogdžog	mɪ:
n.	Dorogari	bɪnɪm	řɪga	džogdžog	mĩř

	<i>*moon</i>	<i>*mountain</i>	<i>*mouth</i>	<i>*name</i>	<i>*neck</i>
a.	mob i	do:r	to:hmən	ni	kona
b.	mɔbi	dořh	tĩ	ni	kuma/ĩñ
c.	mob i	dořh	tuv	niə	uŋ
d.	mɔbi	suka:k	tugum	nʷə	kuna ka:k
e.	mob i	sukak	tu	ni	—
f.	tʃug	iyaphʌ	tubʌřʌʌ	—	kubila kake
g.	mob i	sukak	tubř	nyə	kuna
h.	mob i	podo	thugum	ni	khuna
i.	mob i	do:ř	tub/v	ni	əñ
j.	mob i	do:ř	thu	nʷə	kuna
k.	mob i	do:ř	tu	ni	kuna kha:k ^h
l.	mob i	dɔř	thugəm	ni:	kʉ:nakhak ^h
m.	mob i	dɔř	thugəm	nʷə	kʉ:na
n.	mob i	dɔřɪ	tuv	ni:	əin

	<i>*new</i>	<i>*night</i>	<i>*nose</i>	<i>*not</i>	<i>*one</i>
a.	si:sel	sĩřim	sok ^h	řae	yεpa
b.	si:s:el	sĩřəŋ	sok	řauře	yεpa
c.	si:s:əl	sĩřiŋ	sok	řauře	yεpa
d.	sisəl	səwə:ŋ	scha:k	awəř	yεpa
e.	sisel	sowi	so	maʔate	yiph ^h Λ
f.	sisel	tšowonye	sok ^h akh	auře	yΛpha
g.	sisəl	sowəñ	so ^u	maʔati	yəpha
h.	sis:el	səweñ	sɔ: k ^h akh	řawe	yəpΛ
i.	si:s:al	sĩřəñ	sok ^h	řa:wuř/řae	yeph ^h a
j.	sisel	sĩwəñ	so:	auře	yεpa
k.	sisəl	sĩwəñ	sok ^h	řauř	yεpa
l.	sisəl	səwən	sokak	ma:	yəpa
m.	si:səl	səwən	sokak	ma:	yəpa
n.	sisel	sĩřin	sok	rawe	yəpa

	<i>path</i>	<i>*person</i>	<i>*rain</i>	<i>*red</i>	<i>*root</i>
a.	nia	řəga	phiřo	wodžwodž	aphi
b.	nyau	řəga	phi:řo	wɔdžwɔdž	aphi
c.	ŋa	řiiga	phi:řo	wodžwodž	a·phi
d.	ŋa	řəga	piřo	kuskus	miŋ gəř
e.	nya	—	yai	kuskus	aphi
f.	ŋia	řuga	yaiya	kutkusa	ulion
g.	ñia	řəga	piřo	kuskus	aph
h.	nia	řəga	phiro	wɔdžwɔdž	t ^h a:řa
i.	nia	řəga	phiřo	wodžwodž	a:ph
j.	ny ^a	řəga	phiřo	kuskus	aph
k.	nya	řəga	phiřo	kuskus	sugya
l.	nia	řiiga	phiřo	wɔdžwɔdž	a·ph
m.	ŋya	řiiga	phiřo	k ^h usk ^h us	a·ph
n.	niə	řiiga	phiřo	wɔdžwɔdž	aphi

	<i>*round</i>	<i>*sand</i>	<i>*see</i>
a. Ume	ovomendi	zi:mya	ton ye:řiyon
b. Peawa	ivomki	wi:o	ton yiřyon
c. Abam	ɔ ^h amendi	wio/zimeřh	ton yiřyon
d. Wipim	oganki/ogaindani	—	yəřiyɔ:n
e. Guiam	—	palika	yeřion
f. Yuta	—	miři	məphükha
g. Kapal	ogandani	džimiya	ton yəřyon
h. Gamaewe	owoma:thi	zimyā	thon yəřyon
i. Kuru	əvomendi	zimyā	thon yəřyon
j. Iamega	tĩbambkəph	džimya	thon yəřyon
k. Zim	əwoki	—	yiřyon
l. Wonie	—	džimyə	yiřyon
m. Podari	t ^h umbankiph	dži:ma	yiřyon
n. Dorogari	ovomendi	zimyā	yiřyon

	<i>*seed</i>	<i>*sit</i>	<i>*skin</i>	<i>*sleep</i>
a.	wil kap	ton omanti	gəm	ton yiřte wehe
b.	kip	thon omnətš	gəm	ton yiřət weřəv
c.	wul kip	ɔmdžidž	gum	ton yəthwev
d.	kəp	ton ɔmiti	gōm	yətweg
e.	tuin	omis	gam	yet uen
f.	wülə kapha	omite	gundza	yut wegə
g.	tuniya	ton omis	gəm	ton yet wæg
h.	kə:ph	thon ɔmis	gəm	thon yət wæg
i.	kəph	thon ɔmditš	gəm	thon wehiə
j.	thuiñ	thon omis	gəm	—
k.	kəp	oməte	gum	yitweh
l.	wəlkəph	ɔmis	gim	yət wæg
m.	thunya	omi:s	gim	yət weg
n.	khiiph	omədet	gim	yiət wev

	<i>*small</i>	<i>*smoke</i>	<i>speak</i>	<i>*stand</i>
a.	sobidžok	kimbařa	ton yindžə	ořondəit
b.	bařam	tařba	ton yi:ndž	tʰon ořeñətsʰ
c.	bařam	wul kimbřa	ton yi:ndz	ɔřondžidž
d.	sobidžok	kimbařa	yət	ton ɔñiti
e.	—	kimbařa	audade	ořonds
f.	badamaka	kimbařa	—	ořonite
g.	sobidžok ^h	kimbřa	ton yinden	ton onis
h.	sobidžog	kimbřa	tʰon yindein	ton ɔbonyis
i.	sobidžog	khimbřa	tʰon ekeñiñ/yindeñ	o:řonditš
j.	sobidžog	khimbřa	tʰon yidein/yindeñ	tʰon onʷis
k.	sobidžok	kimbřa	otaiya yindeñ	ořonti
l.	—	khimbřa	yindž	ɔwənis
m.	—	khimbřa	yi:ndž	onyi:s
n.	—	khimbřa	yindž	orəndetš

	<i>*star</i>	<i>*stone</i>	<i>*sun</i>	<i>*swim</i>
a.	ĩkui	gli muz	lom konga	ton avindž
b.	ĩkhi	gli	lom	ton avendeñ
c.	ukwi	gli	lom	—
d.	ĩkh	motəř	lom konga	ton awendž
e.	iki	nadi	gaŋgal	—
f.	bedam	guma	lem kogal	—
g.	əki	gəmo/kɪlɔ	lom konga	—
h.	əki	gəmo	lom khonka	tʰon go:n auřeñ
i.	əkwi	gli	lom	tʰon avendž
j.	ĩki	gəmo	lom konga	tʰon goñauřeñ
k.	ĩki	gimo	lom konga	avin
l.	əkhi	gəmok ^h əp ^h	lom konga	—
m.	ĩkhi	khula	lomkonga	—
n.	əkwi	gli	lom	tʰon awendž

		<i>*tail</i>	<i>*that</i>	<i>*this</i>	<i>*tongue</i>
a.	Ume	keřa	e the	o the	vlat
b.	Peawa	keřa	oteta	ɔ the	vlat
c.	Abam	—	ɔ [^] thet̪ha	ɔ [^] thæ	blat
d.	Wipim	keřa	ət̪e	ət̪e	weat
e.	Guïam	keřʌ	ĩti	ʌ the	yath
f.	Yuta	keřa	—	o the	weate
g.	Kapal	keřa	ət̪e	o the	weyath
h.	Gamaewe	ke:řa	amade	ət̪e	we yath
i.	Kuru	keřa	ət̪eyəm	ət̪e	vlat ^h
j.	Iamega	kheřa	ət̪emb	ət̪e	weath
k.	Zim	keřa	oteta	ote	v̪eat
l.	Wonie	keřa	ət̪emb̃	an the	weath
m.	Podari	keřa	ət̃emb̃re	ət̪eb̃əř	weath
n.	Dorogari	keřa	ɔ the	o the	vlat

	<i>*tooth</i>	<i>*tree</i>	<i>*two</i>	<i>*walk</i>	<i>*water</i>	<i>*we (incl.)</i>
a.	ořkak	wul	nʌmog	ton ikin	ni	mɪn
b.	ořkha:k ^h	wul	nəmɔg	ton yikeñ	ni	min
c.	ořkak	wul	nəmɔg	yi.k ^h	ni	mɛn
d.	ɔřkak	wu:l	nəmɔ:k	ton yi:k	nyə	me:n
e.	ař	wul	nimog	yek	ŋi	—
f.	ořʌ khak ^h	wũlʌ	numag	owopai	niya	—
g.	o:ř khak ^h	wulʌ	numog	ton yiken	ñə	mɛn
h.	oř khak ^h	wul	nəmog	yɪk ^h	ni	min
i.	ɔř	wul	nə:mɔg	thon yik ^h	ni	mɛn
j.	ořka:k	wul	nəmog	thon yi:k	nyə	men
k.	orkhak ^h	wul	nəmog	yək	ni	mɪn
l.	ɔřkhak ^h	wul	nɪmɔg	yi:k ^h	ni	—
m.	ɔřkhak ^h	wul	nɪmɔg	yi:k ^h	nɪə	—
n.	oř	wul	nɪmɔg	yi:k ^h i	ni	—

	<i>*what</i>	<i>*white</i>	<i>*who</i>	<i>*woman</i>	<i>*yellow</i>
a.	nəŋgae	bulbul	yente	kɔŋga	mɯlmɯl
b.	nəŋgae	tʃɔtʃɔl	yənte	kɔŋga	mulmul
c.	nəŋgai	bulbul	yəntʰæ	kɔŋga	mɯlmɯl
d.	nəŋgai	bɪlbɪl	yente	kɔŋga	mulmul
e.	naŋkʰai	bilbil	yentʰe	kɔŋga	mulmul
f.	nəŋgai	salsal	yonte	kɔŋga	mulmul
g.	nəŋgai	bulbul	yentʰe	kɔŋka	mulmul
h.	nəŋgae	bɪlbɪl	yənte	kɔŋga	mɪlmɪl
i.	nəŋgae	bɪlbɪl	yə:ntʰe	kʰɔŋga	mɯlmɯl
j.	nəŋgae	bɪlbɪl	yəntʰe	kʰɔŋga	mulmul
k.	naŋae	tʃɔtʃɔl	yənte	kɔŋgo	mulmul
l.	ŋəŋgai	bulbul	yəntʰe	kʰɔŋga	mɪlmɪl
m.	nəŋgəŋə	bɪlbɪl	yɛ:t	kʰɔŋga	mɯlmɯl
n.	nəŋgae	bulbul	yɪn tʰe	kʰɔŋga	mɯlmɯl

	<i>*you (sing.)</i>
a.	man
b.	man
c.	man
d.	ma:n
e.	man
f.	manʌ
g.	ma:n
h.	man
i.	man
j.	man
k.	ma:n
l.	man
m.	ma·n
n.	man

BIBLIOGRAPHY

BEE, D. and A. PENCE

- 1962 'Toward Standardisation of a Survey Word List for Papua and New Guinea'. *Studies in New Guinea Linguistics. Oceania Linguistic Monographs*, 6. Sydney: University of Sydney.

HOOLEY, B.

- 1971 'Austronesian Languages of the Morobe District, Papua New Guinea'. *Oceanic Linguistics* 10/2:79-151.

SWADESH, M.

- 1954 'Perspectives and Problems of Amerindian Comparative Linguistics'. *Word* 10:306-32.

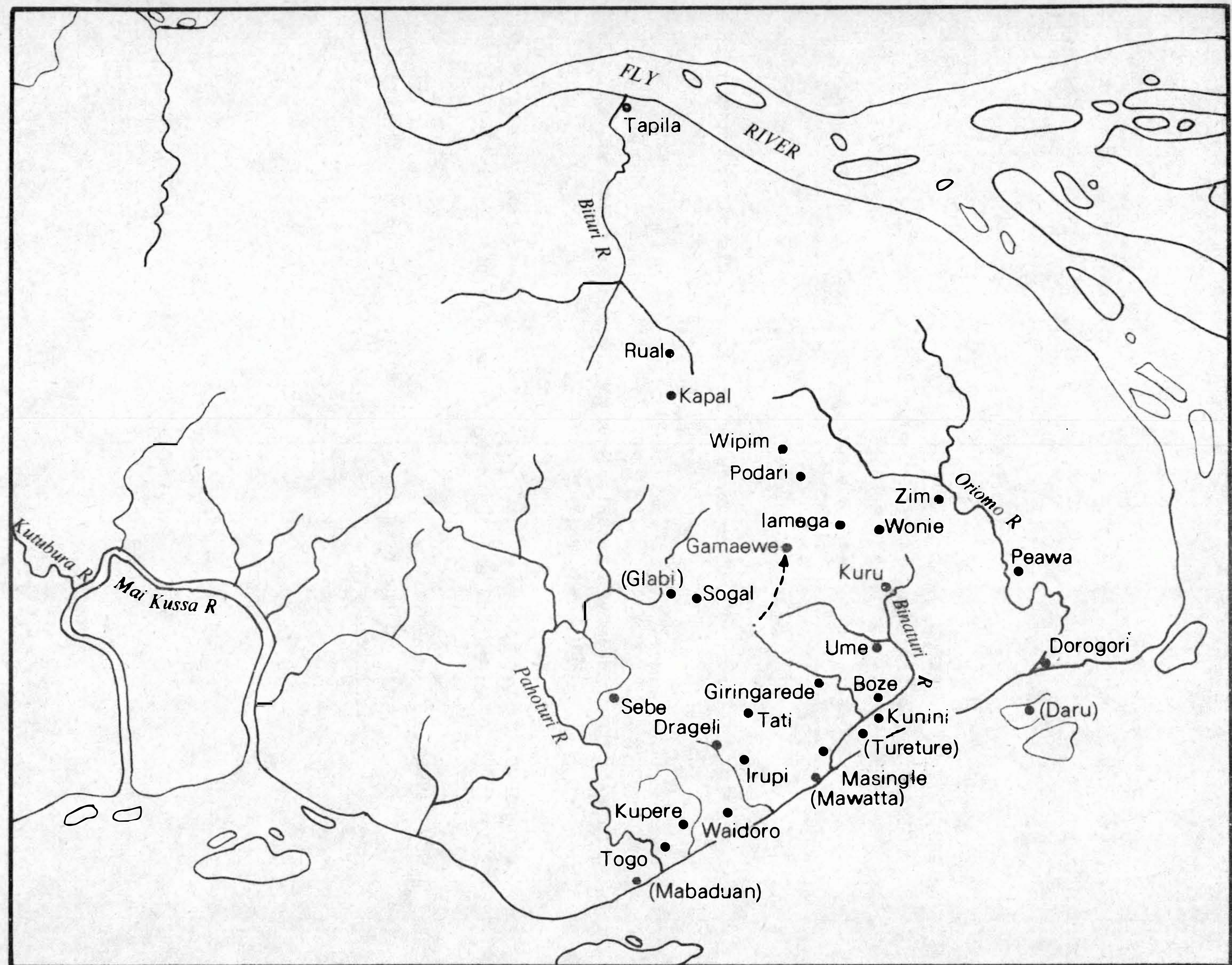
VOORHOEVE, C. L.

- 1968 'The Central and South New Guinea Phylum'. *PL*, A16:1-17.

WURM, S. A.

- 1971 'Notes on the Linguistic Situation in the Trans-Fly Area'. *PL*, A28:115-72.

VILLAGES OF THE EASTERN TRANS-FLY LANGUAGE FAMILY



NOTE: Those villages given in parentheses belong to other language families.

BANONI, PIVA, AND PAPUANIZATION

PETER C. LINCOLN

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0.1. INTRODUCTION

In this paper I present samples of texts, of words, and of grammatical analysis from several varieties of the two Austronesian languages of southwest Bougainville, Banoni and Piva. These data are meant to be representative of these languages and useful for wider comparisons with other Austronesian languages. I do not undertake such comparative work here. I do compare Banoni and Piva with available lexical and grammatical information on Rotokas in order to test the claim that "Piva is a Banoni dialect strongly influenced in vocabulary by Rotokas" (Oliver 1949: 10) or that "Piva [is] Papuanized Banoni" (Oliver 1949: 10, Capell 1962: 168, 173).

I intend to show that Oliver's explicit claim about the relation of Piva and Rotokas vocabulary is incorrect. In the process I attempt a

general, explicit statement of the concept of Papuanization. I also try to test the more general claim that Piva is Papuanized.

Most of the information currently available is lexical, and that part of the test is quite satisfactory. The less detailed information on other facets of the languages involved entail weaker conclusions about the general claim.

0.2. DEFINITIONS

Banoni is an Austronesian language spoken from the Puriaka River to the Laruma River on the southwest coast area of Bougainville.

Piva is an Austronesian language spoken inland from the northern Banoni area from Laruma River toward Mount Bangana, also in Amun village to the north.

Papuanization is the process through which Austronesian linguistic devices of lexicon, grammar, and phonology are modified or distorted toward, or abandoned in favour of Papuan linguistic devices.

Papuan here refers to non-Austronesian indigenous languages of Papua New Guinea. In the Bougainville context, the Papuan languages are: Rotokas, Konua, Keriaka, Eivo (North Bougainville Phylum); and Siwai, Buin, Nasioi, and Nagovisi (South Bougainville Phylum) (See Allen and Hurd 1965).

Proto Oceanic refers to the language ancestral to all members of the Oceanic subgroup of Austronesian languages. Banoni, Piva, and several hundred other Melanesian, Polynesian, and Micronesian languages comprise this subgroup. Reconstructions are cited from Grace (1969).

0.3. ORTHOGRAPHY

I will use the Rotokas orthography established in *Vocabulary of Rotokas, Pidgin, and English* (abbreviated VRPE) by Firchow, Firchow, and Akoitai (1973). The vowels i, e, a, o, u represent the normal phonetic values; repeated letters represent long vowels.

p, t, k represent voiceless stops. s is a voiceless fricative which occurs only before i and could be treated as an allophone of /t/.

v represents [β] and in some varieties also [b] and [m].

r represents [ɾ] and in some varieties also [d] and [n].

g represents [ɣ] and in some varieties also [g] and [ŋ].

(See also Firchow and Firchow 1969.)

For Piva and Banoni, I will use the orthography proposed in Lincoln (1975). Briefly, p, t, k, b, d, g, m, n, i, e, a, o, u represent

normal phonetic values; ts [tʃ] or [ts], dz [dʒ] or [dz], va [βa], [βæ], or [wa], vo or gho [βo], vu or ghu [βu], otherwise v [β], gh [ɣ], ng [ŋ], ' [ʔ], r [ʀ] or [ɭ], and s [ʃ] or [s]. Pitch and stress are not marked. Repeated letters represent long vowels or nasals.

1.0. LEXICAL COMPARISON OF BASIC VOCABULARY

The meanings represented in the Swadesh 100 Word List were chosen to facilitate quantitative statements of relationship among languages of a single family. One principle involved in the selection was to avoid words that were likely to be borrowings. The list is used here to test if the claimed heavy influence of Rotokas on Piva shows up in these most basic words. If the claim is true, it should be verified by this comparison. If the claim is not true, we will have to look further for evidence to decide the issue. We will see that the claim is not verified here and we will look at other evidence in a later section.

Now I would like to explain the structure and purposes of basic data presented in this section. Table 1 is arranged in eight columns. The first gives the gloss for the items in each row. The other columns show words with these meanings as found in three Banoni villages, three Piva villages, and the Rotokas dictionary. The words in the column labelled Mariga were collected during my field work in 1973 from a speaker representing the Mabas-Mariga cluster of villages. The words in the column labelled Matsunke were collected by Jerry Allen and Conrad Hurd, both of the Summer Institute of Linguistics, during their survey of the Bougainville District in 1963. The words in the column labelled (GWG) were collected by G. W. Grace during the Tri Institute Pacific Project in 1955. The village represented may be Koiari but that is my speculation, because the list was collected in Rabaul and the village is not known. The words in the column labelled Koromaketo were collected by Allen and Hurd in 1963, the Piva words were collected by me in 1973, and the Amun words, perhaps better called Buruve, were collected by Allen and Hurd in 1963. The Rotokas list was compiled by me from VPRE. I chose some synonyms for single meanings to be sure I got the right meaning and to be sure that I did not overlook any obvious borrowings.

The primary purpose of Table 1 is to conduct a limited search for shared words between Banoni or Piva and Rotokas. I will discuss individually each possibly shared word, but I would like to point out here other actual and potential uses of this table. I present in a later section a lexicostatistical study of the Banoni and Piva varieties. I

intend that the interested reader will be able to compare these lists with similar lists published for related languages, e.g. Hooley (1971).

There are several reasons for presenting so many lists. One is the internal comparison mentioned already. A second is that my observations of and information gathered about other villages speaking these languages indicates that all significantly different varieties of Banoni and Piva are represented. This forestalls the objection that the crucial Papuanized dialect might have been overlooked. The third reason is that the agreement among these reports by various collectors indicates that elicitation problems have been minimal for all (See Laycock 1970 for discussion of such problems and also design of SIL and TRIPP lists used).

Table 1 is presented on pages 81 to 85.

1.1. SHARED WORDS

#2 P: ghavutana R: gavuta *ashes*

The first two syllables may reflect Proto-Oceanic (POC) *apu *ashes* with an unexplained initial consonant. A similar form of the word is found among several other Austronesian languages in Bougainville: Saposaa kuaf, Halia koahu, Uruava koavu (data courtesy of J. Allen, C. Hurd, and Summer Institute of Linguistics), and even as far away as Rabaul: Tolai kabu (Franklin, Kerr, and Beaumont 1974). These possible cognate words of wide distribution strongly suggest that the word comes to Rotokas from Piva.

#14 B: nukuta, nukuita R: rukuta *cloud*

This looks very much like Rotokas influence — but on Banoni and not Piva. /r/ and /n/ represent a single phoneme in Rotokas. (The Amun word was said to be the name of Mount Bangana rather than the word for *cloud*. However, I did not have a chance to go to Amun to verify this report by Piva speakers.)

#20 B,P: raga, ragha R: raka *dry*

The Rotokas word raka has the meaning *dry up* and also *reef*. Since the Rotokas mostly live in the mountains we should be suspicious that the word comes from coastal Austronesians. The correspondence of /gh/ or /g/ to /k/ is not what we would expect (compare #14). The answer may be that the Rotokas borrowed the word from their neighbours to the northeast, the Teop, where the word for *dry* is raka. This word is probably cognate with the Banoni and Piva forms but Teop is the more likely source for the Rotokas borrowing.

TABLE 1: SWADESH 100 WORD LISTS

Gloss	B A N O N I			P I V A			Rotokas
	Mariga	Matsunke	(GWG)	Koromaketo	Piva	Amun	
1 <i>all</i>	ke <u>kota</u> ¹	na <u>kota</u> ¹	na <u>kota</u> ¹	ane <u>kota</u> ¹	ane <u>kota</u> ¹	ane ne <u>goda</u> ¹	vara r ^u tu
2 <i>ashes</i>	kavinoka	pona ¹	pona ¹	ghavutana ²	ghavutana ²	ghavutana ²	gavuta ² purukai
3 <i>bark</i>	kabun-na ¹	kabun-na ¹	kabun-na ¹	kabunu-na ¹	kabunu-na ¹	rageana	kakauoa, rakari rakari
4 <i>belly</i>	kore-na ¹	kore-na ¹	kore-na ¹	sopa-na ²	sopa-gu ²	siopa-na ²	siare
5 <i>big</i>	bangana ¹	bangana ¹	bangana ¹	roghata ²	roata ²	vosa'ana	riro, rei
6 <i>bird</i>	manughu ¹	manugu ¹	manughu ¹	manughu ¹	manughu ¹	manu'u ¹	kokioto
7 <i>bite</i>	kanatsi ¹	kanata ¹	kanata ¹	kanatsi ¹	kanata ¹	kaanata ¹	avu, kotu
8 <i>black</i>	dotsi	nunumini ¹	nunumini ¹	ninupi ²	ninupi ²	tsibitsibi	sigarupa
9 <i>blood</i>	ngatsi ¹	ngatsi-na ¹	ngatsi ¹	maranaa-na ²	marana ²	makana	revasiva
10 <i>bone</i>	sipan-na ¹	sipan-na ¹	sipan-na ¹	spana-na ¹	sipan-na ¹	sipana-na ¹	keru
11 <i>breast</i>	<u>su</u> -na ¹	<u>su</u> -na ¹	<u>su</u> -na ¹	vi- <u>su</u> -na ¹	vi- <u>su</u> ¹	vi- <u>su</u> -na ¹	roroua
12 <i>burn</i>	bu ¹	bu ¹	vanangi	tomokou ²	tsumoko ²	bu ¹	piu, kasi
13 <i>claw</i>	—	kari tenge-na	—	kapai nae manughu	—	vighuna	—
14 <i>cloud</i>	kamo	kabu ² nukuta ¹	vi-kabu ² nuku ¹ ita ¹	vi-kabu ²		(a bangana)	rukuta ¹
15 <i>cold</i>	misangono	tootonoko ¹	totonoko ¹	vinogoro	omenaga	toonoko ¹	uteo, vukusi
16 <i>come</i>	tai- <u>ma</u> ¹	tai- <u>ma</u> ¹	tai- <u>ma</u> ¹	nu- <u>mai</u> ¹	nu- <u>mai</u> ¹	nu- <u>mai</u> ¹	urio
17 <i>die</i>	mate ¹	mate ¹	mate ¹	mate ¹	mate ¹	mate ¹	kopi
18 <i>dog</i>	bekeu ¹	bekeu ¹	bekeu ¹	bekeu ¹	vi-daga	bekeu ¹	kaakau
19 <i>drink</i>	kuu ¹	ku ¹	ku ¹	kuu ¹	ku ¹	ku'u ¹	roroo, ukaio
20 <i>dry</i>	ragha ¹	raga ¹	ragha ¹	raagha ¹	raga ¹	matsi	posiposi, raka ¹

Gloss	B A N O N I			P I V A			Rotokas
	Mariga	Matsunke	(GWG)	Koromaketo	Piva	Amun	
21 <i>ear</i>	tangina ¹	tangina ¹	tangina ¹	taghina-na ¹	tagina ¹	tangina-na ¹	uvareoua
22 <i>earth</i>	gomono ¹	gomono ¹	gomono ¹	vi-paata ²	vi-peta ²	e-peeta ²	rasito
23 <i>eat</i>	tam ¹	tam ¹	tam ¹	tam ¹	tam ¹	tam ¹	aio,gata
24 <i>egg</i>	panusu ¹	panusu ¹	panusu ¹	panusu ¹	panusu ¹	panus ¹	takura
25 <i>eye</i>	mata ¹	mata ¹	mata ¹	mata ¹	mata ¹	mata ¹	osireito
26 <i>fat</i>	maringi ¹	maringi ¹	maringi ¹	maringi ¹	miringi ¹	maringi ¹	sisiara,tuuga
27 <i>feather</i>	pun-na ¹	puata ²	puata ²	puata ²	puata ²	vunu ¹	orupa
28 <i>fire</i>	dzai ¹	dzai ¹	dzai ¹	dzai ¹	dzai ¹	vi-abi ¹	erava,eto,tuitui
29 <i>fish</i>	bosi ¹	bosi ¹	bosi ¹	bosi ¹	bosi ¹	vi-igana	atarito
30 <i>fly</i>	burunu ¹	burunu ¹	burunu ¹	bururu ¹	bururu ¹	bururu ¹	papa,vokapie
31 <i>foot</i>	taban-na ¹	tabana ¹	napini	vana ¹	taghana ¹	pitopito	tasiua
32 <i>full</i>	—	busa	--	vonu ¹	ko tsubu	bonu ¹	agasi
33 <i>give</i>	mana-a ¹	mana ¹	mana ¹	mana ¹	mana ¹	mana ¹	vate,roopie
34 <i>good</i>	daame ¹	dame ¹	daame ¹	daame ¹	rovi ²	vi-rovi ²	rekoreko
35 <i>green</i>	kiaka	bubune ¹	bune ¹	vi-buune ¹	bebune ¹	bunebune ¹	uriko
36 <i>hair</i>	pun-na ¹	pun-na ¹	pun-na ¹	vunu ¹	vunu ¹	buno ¹	purukou,orui
37 <i>hand</i>	numa-na ¹	kamarigina	numa ¹	vi-ghuuna	numa ¹	vi-numa ¹	vavae,vuvuko
38 <i>head</i>	tope-na ¹	tope ¹	tope ¹	topene ¹	tope ¹	tapine ¹	kukueva
39 <i>hear</i>	nongono ¹	nongono ¹	nongono ¹	nongono ¹	nongono ¹	nongono ¹	uuva
40 <i>heart</i>	momono ¹	vuvasa-na ²	momo ¹	vughasana ²	momo ¹	vugavugasa ²	vovouisi
41 <i>horn</i>	—	—	—	—	—	—	—
42 <i>hot</i>	monoghu	vaisisiki ¹	vaisiki ¹	vaisisiki ¹	vaisiki ¹	vasikisiki ¹	kasirao
43 <i>I</i>	na ¹	na ¹	na ¹	ana ¹	ana ¹	ana ¹	ragai
44 <i>kill</i>	<u>tsuna</u> ¹ na ke mate	<u>tsunu</u> ¹ va mate	<u>tsunu</u> ¹ nna	<u>atsunu</u> ¹ wa mate	<u>atuna</u> ¹	ba mate	roveu kepipie

Gloss	B A N O N I			P I V A			Rotokas
	Mariga	Matsunke	(GWG)	Koromaketo	Piva	Amun	
45 <i>knee</i>	—	tsungu-na ¹	tsuguna ¹	tsunguna ¹	tsughuna ¹	vi-tunguna ¹	kotupiu
46 <i>know</i>	kuki ¹	kuuki ¹	kuuki ¹	kiinai ²	kinai ²	kinar ²	taraisia
47 <i>leaf</i>	nanna ¹	nanna ¹	nanna ¹	vagini ²	vagini ²	vagivagindi ²	vagai, vakia ²
		vivitsi					
48 <i>lie down</i>	tsereghe ¹	tserege ¹		te ²	kapurona	te ²	gere
		tsebara	sabara				
49 <i>liver</i>	date-na ¹	date ¹	date-na ¹	vi-ate ¹	vi-ate ¹	vi-ate ¹	tokata
50 <i>long</i>	gaarusu ¹	garusu ¹	ghaarusu ¹	ghegharege ²	gheghareghe ²	ghareghareghe ²	kaekae, riro
51 <i>louse</i>	ghutsu ¹	vutsu ¹	ghutsu ¹	ngisa ²	ngisa ²	vi-ghotsu ¹	irui
52 <i>man</i>	tamata ¹	tamata ¹	taavana ²	tsioni ³	tsioni ³	vi-tavana ²	oirato
53 <i>many</i>	kabang ¹	kabang ¹	vadzumare ²	pipisi ³	pipisi ³	vadzumare ²	riroara
54 <i>meat</i>	kogana ¹	kogana ¹	kogana ¹	sigho-na ²	sigho-na ²	bi-sigho-na ²	siope to
55 <i>moon</i>	madava ¹	madava ¹	madava ¹	madava ¹	madava ¹	pigina	utavai
							kekira
56 <i>mountain</i>	tonoso ¹	tonoso ¹	mete	tonoso ¹	tonoso ¹	vi-tonoso ¹	toisikova
							pukui
57 <i>mouth</i>	mango-na ¹	manga ¹	mango-na ¹				
	dase-na ²			asene ²	vi-asene ²	papana	gisipo
58 <i>name</i>	vasanga-na ¹	vasanga ¹	vasanga-na ¹	wasanga ¹	wasanga ¹	wasanga ¹	vaisia
59 <i>neck</i>	kokoromo-na ¹	kokoromo ¹	kokoromo ¹	ngio-na ²	ngiom ²	vinio	kairo
							kopairo
60 <i>new</i>	ghoom ¹	ghom ¹	ghom ¹	evaunu ¹	vaunu ¹	marekun	airepa
61 <i>night</i>	bongi ¹	bongi ¹	bongi ¹	bongi ¹	bongi ¹	bongi ¹	rupa
							voki
62 <i>nose</i>	vivitsi-na ¹	bisu-na ²	vivitsi ¹	visu-na ²	visu ²	viisu-na ²	iruvaoto

Gloss	B A N O N I			P I V A			Rotokas
	Mariga	Matsunke	(GWG)	Koromaketo	Piva	Amun	
63 <i>not</i>	ghinava ¹	inama ¹	ginayama ¹	ka ana ²	ka'ana ²	kana ²	viapau
64 <i>one</i>	kadaken ¹	kadaken ¹	kadaken ¹	kadakeni ¹	kadaken ¹	kiisina	katai
65 <i>path</i>	sanana ¹	sanana ¹	sanana ¹	raimi ²	raimi ²	vi-raimi ²	raiva ²
66 <i>person</i>	tavana ¹	tabana ¹	taabana ¹	tawana ¹	na-tavana ¹	vi ^{tsionikatsu}	oiravure
67 <i>rain</i>	gharau ¹	gharau ¹	gharau ¹	gharavu ¹	gharaghu ¹	vi-garao ¹	kokeva, rauriva
68 <i>red</i>	bubu ¹	bubu ¹	bubu ¹	memerana ²	memerana ²	ebubu ¹	turuea, revasi
69 <i>root</i>	baghara ¹	baghara ¹	baghara ¹	bagharai ¹	viaputu	bagara ¹	vavurupa
70 <i>round</i>	—	papadaka ¹	papadaka ¹	papadaka ¹	—	papadaka ¹	kororo:si
71 <i>sand</i>	pitsima ¹	pitsi ¹	piitsima ¹	buini ²	vuini ²	buini ²	rogara
				visaava			
72 <i>say</i>	dara ¹	dara ¹	dara ¹	daagha ²	vi-dagha ²	tsiirro	pura
73 <i>see</i>	reghe ¹	rega ¹	reghe ¹	reghe ¹		romai	keke
				kato ²	katoa ²		
74 <i>seed</i>	<u>vana</u> ¹	<u>vara</u> ¹	kamari	nganiina		<u>vaana</u> eviago ¹	vurua
				<u>vaana</u> ¹	kakumu		
75 <i>sit</i>	gonal	gonal	gonnal	gonal	gonal	napa	pau
76 <i>skin</i>	kabuna ¹	kabuna ¹	kabun ¹	kabunu ¹	ghuni	vitua	rakari, kakauoa
77 <i>sleep</i>	matsure ¹	tserege	matsure ¹	tekunungu	tee ²	tee ²	uusii
78 <i>small</i>	kisarikunu	kiikinaki ¹	kikinaki ¹	pasuru ²	pasuru ²	kakisaka	kakai, gare
							kakapikoa
79 <i>smoke</i>	dasa ¹	dzaso ¹	daso ¹	vi-aso ¹	vi-aso ¹	vi-aso ¹	kupareto
80 <i>stand</i>	tsigom ¹	tsigom ¹	tsighong ¹	tsughonu ¹	tsughonu ¹	tsuvonu ¹	tore
81 <i>star</i>	pipito ¹	pipito ¹	pipito ¹	pipito ¹	pipito ¹	pipito ¹	visiuriko, aviko
82 <i>stone</i>	paratsi ¹	paratsi ¹	paratsi ¹	paratsi ¹	paratsi ¹	paratsi ¹	aveke
83 <i>sun</i>	para ¹	para ¹	nanga	para ¹	para ¹	para ¹	ravireo

Gloss	B A N O N I			P I V A			Rotokas
	Mariga	Matsunke	(GWG)	Koromaketo	Piva	Amun	
84 <i>swim</i>	sum ¹	su ¹	kasa	tso kapene	sisiu	tsubu	aata
85 <i>tail</i>	kokoreka ¹	kokoreka-na ¹	kokoreka-na ¹	vavivurna	kurena	kokoreka ¹	kookoopi ,tope tope
86 <i>that</i>	nana	nabo ¹	nabo ¹	aneya	eia vua	rii rani	eva
87 <i>this</i>	ie ¹	ie ¹	nabe	ane- <u>ie</u> ¹	nanai	ebaare	vao
88 <i>thou</i>	no ¹	no ¹	no ¹	aghoi ²	aghoi ²	aghoi ²	vi
89 <i>tongue</i>	mea-na ¹	mea ¹	mea ¹	mea ¹	mea ¹	mea ¹	arevuoto
90 <i>tooth</i>	niki-na ¹	nuki ¹	nuki ¹	noki ¹	noki ¹	vi-noki ¹	reuri ,ketato
91 <i>tree</i>	napini ¹	naapini ¹	naapini ¹	ghau ²	ghau ²	vi-ghao ²	asiao ,evaova
92 <i>two</i>	toom ¹	tom ¹	toom ¹	tonua ¹	tonua ¹	toonua ¹	erao
93 <i>walk</i>	tai ¹	tai ¹	tai ¹	nau	taghana ²	tagana ²	voka
94 <i>water</i>	koromo ¹	koromo ¹	koromo ¹	koromo ¹	koromo ¹	vi-koromo ¹	uukoa
95 <i>we</i>	ghata ¹	ghata ¹	ghata ¹	aghaita ¹	aghaita ¹	aghaita ¹	vigei
	ghamam ²	—	ghamam ²	—	amam ²	—	igei
96 <i>what</i>	hoa ¹	sua ¹ paringi	ke sava	eka aeka ²	eka?e ²	—	eakea ²
				e paringi	—	pairingini	apeisi
97 <i>white</i>	kakata ¹	kakata ¹	kakata ¹	kakata ¹	kakata ¹	kavokavo	kaapo
98 <i>who</i>	hee ¹	<u>se</u> ¹	no <u>see</u> ¹	asiaghoi ¹	<u>asee</u> ¹	<u>sie</u> ni ¹	iroua
99 <i>woman</i>	moon ¹	mono ¹	moon ¹	maunu ¹	maunu ¹	maunu ¹	riakova
100 <i>yellow</i>	kakarasa ¹	kakarasa ¹	marekatsi	ghari ²	ghari ²	maamisa	kesie

#36 B: pun- P: vunu, buno R: purukou *hair*

If this is a borrowing, and the extra syllable in Rotokas suggests that this may be chance resemblance, then the borrowing is surely from Austronesian, reflecting Proto-Oceanic *pulu *body hair*.

#47 P: vagini, vagivagindi R: vagai, vakia *leaf*

The Piva forms may be borrowed from Rotokas; however, I cannot explain the differences. Further, I cannot explain the differences between the two Rotokas words. We have already noted that variation in voicing is not likely in the Rotokas system. There is another Rotokas word for leaf, guruva. It would seem that none of these had a direct relation to the Piva words.

#54 P: sigho- R: siopeto *meat*

Again, there is a similarity, but the Rotokas word has extra unexplained syllables, making this probably a chance resemblance.

#64 B,P: kadaken R: katai *one*

There is similarity here too, but again it is likely a chance resemblance. Recall that the Rotokas system relies heavily on the voiced-v.-voiceless distinction. So while we can accept correspondences among voiced consonants as being regular, we should not expect correspondences between voiced and voiceless consonants. Thus, /d/: /t/ correspondence is likely due to chance. Further, dropping /k/ and final /n/ would be possible, but if the influence were from Rotokas to Piva we would need to know why these consonants were added. Such problems are avoided if we conclude that this is a chance resemblance.

#65 P: raimi R: raiva *path*

The match here is quite good (recall that the Rotokas spelling may be pronounced [raima]). Since the Banoni form reflects POC *salan or *njalan, it is quite likely that the Piva word is borrowed from Rotokas displacing an Oceanic word.

#96 P: eka aeka, eka'e R: eakea *what*

This is perhaps the best and most significant example of Rotokas influence on Piva, because it appears to have displaced a high-frequency and usually stable Austronesian word that might be considered a grammatical morpheme.

#97 P(Amun): kavokavo R: kaapo *white*

This looks like a possible early loan, either to or from Rotokas. The Amun now live up the coast not in direct contact with Rotokas speakers.

1.2. EXTENT OF INFLUENCE

To evaluate the extent of influence in basic vocabulary, we can classify the shared vocabulary according to source and goal of influence.

Rotokas to Piva: #96 *what*, #65 *path*, less likely #54 *meat*,
#47 *leaf*.

Rotokas to Banoni: #14 *cloud*.

Rotokas to Amun: Possibly #97 *white*.

Rotokas to Banoni and Piva but not Amun: Possibly #64 *one*.

Piva to Rotokas: #2 *ashes*.

Banoni to Rotokas: Perhaps #36 *hair*.

Teop to Rotokas: Probably #20 *dry*.

The basic 100-word vocabulary is at least 90% free of influence in either direction.

There are two clear examples of Rotokas influence on Piva. Even accepting the less likely cases as influence rather than chance resemblance would not verify the claim of strong influence. On the other hand, since the sample is not really representative, we must examine further evidence to disprove the claim. Let us first consider possible influence on grammar.

2.0. GRAMMATICAL COMPARISON

Banoni and Piva have such surprisingly different tense/aspect marking that I was not able to make much sense out of the latter in my brief exposure. They both use similar sets of preverbal particles but with quite different effect.

2.1. SKETCH OF BANONI ASPECT

Completive

The most used aspect is the one showing completion of activity or state of being:

/ko/ with first or second person singular,

/ke/ with third person singular, and

/ka/ with all persons in plural.

With active verbs:

na ko tai *I went*.

no ko tai *Thou went*.

nna ke tai *He went*.

ghata ka tai *You and I went*.

With stative:

numa ke daame *The house is good.*

Future tense

Other markings are not inflected for person:

/ta/ immediate or definite future; all persons.

na ta geroo *I will go back.*

Completive and future

Completive and future may be combined, giving the idea of something in progress that is about to be completed.

na ko ta geroo *I am going back.*

With statives, this combination emphasizes progress:

Ken ke bangana *Ken is big.*

Ken ke ta bangana *Ken has become big/Ken is getting big.*

Indefinite future

Indefinite future is expressed by /ma/.

ghata ma ngasa kang *Let's chew some betel.*

na ma geroo *I should return.*

Negation

Negation of completive is expressed by /to/.

na ko to tai *I did not go.*

sigana ke to daame *The pepper catkin is no good.*

Negation of indefinite future also involves /to/.

na ma to geroo *I should not return.*

Negation in present is expressed by /ghinava maa/.

na ghinava maa kuki *I don't know.*

This very brief sketch is of course incomplete, but gives a glimpse of the high points of Banoni aspect and should be sufficient to interpret most of the text in a later section.

2.2. NOTES ON ASPECT IN PIVA

/ko/ past for all persons.

aria ko nau *They went.*

e ko pee *Then he said.*

/tsa/ future for all persons.

agham tsa nau *You go.*

/tso/ present all persons.

ana tso kina *I know.*

/tso/ also past.

ana tso nau *I went.*

ana ko taghana *I walked.*

/ka/ future (dependent?).

keni mai ghom ebuva^{gha}, ana ka repi

Bring some betel nut, {^I_{for me}} {^{will}_{to}} chew.

/ka/ is used with negative.

tavana ka'ana ka butsi ane e bekeu

The man did not hit the dog.

These notes are incomplete and somewhat inconsistent, but one can see that a different system is at work even though some of the markers look very much the same in Piva and Banoni.

In both languages, verbal prefixes correlate with the subject or agent of the verb, e.g. /va-/ (causative prefix) and verbal suffixes relate to objects. With these facts in mind, let us look at Rotokas.

2.3. ROTOKAS VERB SKETCH (from VRPE)

Rotokas verbs are marked with suffixes for

- (a) continuing action /-pa/,
- (b) subject: person, number and gender, and
- (c) time.

time	intransitive	transitive
remote past	/-epa/	/-va/
distant past	/-era/	/-vora/
near past	/-erao/	/-vorao/
immediate past	/-e/	/-vo/
present	/-ei/	/-voi/
near future	/-vere/	
distant future	/-verea/	

2.4. CONCLUSION

We can see that Rotokas marks the verb in a totally different way for different categories than either Banoni or Piva. This means no influence detected.

2.5. COMPARISON OF WORD ORDER

Banoni and Piva have much the same word order options. Basically, (Time)(Subject)Verb(Subject)Object(Time)(Place)....

Subjects may come after the verb, showing subjunction of a previous clause to show sequence of events. For example,

nna ke kotsi. ke kotsi-a nna, nna ke ghoitsi.

He cut (it). Having cut-it he, he carried (it).

- 2 T: ke tovi-ria tsina-ri
P: ko tovi-ria a-tsina-ria
M: tsina-ri ke tovi-ria na-natsu-na ghe-ri ghinima.
G: mother-their P send-them pl-child-her their five A-mother-their
- 3 T: (ma taigham) mo sisi. " gham ta sisi
P: sisiu. " tsa sisiu
M: ka tai mo sisi. "rubasa-na sisi me-gham,
G: P go to bathe finish-its you F bathe your
- 4 T: ghammi ghotsu-
P: wa-ruba' agham, vi agham ko ghotsu
M: mami
G: cause-finish you, then you P return
- 5 T: -ma nna tsunaka
P: gero- -mai ane tsuna
M: toghoso -ma paghe-mi toton-na
G: back go up hither him but don't-you lose-him
- 6 T: kasi-mi kikinaki paghe-mi totom."
P: a-kasi-miu pasuru kenakena
M: kasi-mi kina."
G: bro.-your small don't-you lose get-get-him
- 7 T: nari ka tai naanaa.
P: nuvu aghame." vi aria ko nau.
M: ka ghuru
G: pull you then they P go so go down
- 8 T: ka ne sisi naanaa. ka si-sisi.
P: vi aria ko sisiu. ko sisiu
M: mo sisi.
G: then they P come and to bathe so P (pl)bathe
- 9 T: ka si-sisi. vi kasi-ri gari
P: ko sisiu a-kasi-ria rooghata
M: rubasa-na sisi man-nari kasi-ri bangana
G: finish-its P (pl)wash their then A-bro.-their big
- 10 T: ke va, "be-batava ba"
P: ane ko pee, "be-batava'ita agham"
M: ke va-i-ri, "to-toghoso"
G: he P say-D-them pl-get {^{out}_{up}} us you !
- 11 T: ka batava nana vi nna ke va
P: vi aria ko batava vi ane ko pee
M: ke va
G: then they get out that then he P say

- 12 T: "vai-se -ta kam. ghata te ghe-ra ghinima-nuu."
 P: "vai-se -ta 'om. aghaita te ghe-ra nima-nuvu."
 M: kerui-ta. ghe-ra ghinima-nuu te."
 G: recip.-count-us first we are our five-only are
- 13 T: vi ke se nana-i gari
 P: vi ko se 'ikaa kasi-ria rooghata
 M: kasi-ri ke tanegha mo se
 G: bro.-their then P begin to count this-D bro.-their big
- 14 T: "kadaken, toom, dapisa, tovatsi, ee
 P: "kadakeni, tonua, topisa, vavatsi, ee
 M: "kadaken, toom, dapisa, tovatsi, naghama
 G: one two three (ord)four listen
- 15 T: va-ghinima ba ghinava-ni."
 P: va- nima-ra ka'aana."
 M: va-ghinima-ra te ba ghinava-ni."
 G: ord-five-our is ! not-here
- 16 T: ka sane nobe.
 P: vi aria ko suku mai.
 M: nari ka kobo gero nobe mo sane.
 G: then they P go-down back again to search again hither
- 17 T: ka hatawa gero nobe.
 P: vi aria ko batawa gero mai karaia
 M:
 G: then they get-out back hither again [?]
- 18 T: ghe-na kadaken ke wa, "e ko reke na mo
 P: "
 M: " vatana i na ko
 G: his one P say O.K. this time I P see I to
- 19 T: se -ta."
 P: aghaita ka vai-se gero-mai 'om."
 M: se -ta ta."
 G: we P recip.-count-us is back-hither-first
- 20 T: ke se nobe, vasi katsu ta
 P: vi ane ko va-se-mai vasi-na katsu-mai
 M: nna ke vasi katsu ta-u-va
 G: then he P cause-count-hither again just-it only-hither is-there-it
- 21 T:
 P:
 M: kasi-na bangana mo se. ghe-ri tovatsi katsu ta.
 G: bro.-his big to count their four only are

- 22 T: vi nari ka ghotsu naanaa.
 P: aria katsi ko ghotsu
 M: rabaka-ri mo ram
 G: then they just P return-their just to village
- 23 T: tsina-ri ke va nau, "kave?"
 P: a-tsina-ri ko pee nau, "gere?"
 M: tsina-ri ke va-i-ri, "vai vasi?"
 G: A-mother-their P say- -them there "How's it?"
- 24 T: "e ba kadaken wa-ghinima-mam ke karikoto."
 P: "vi kadaken-ni -mam ko karikoto."
 M: " kadaken-ni -mam te ba ke soko."
 G: well one-of ord-five-ours is ! P loose
- 25 T: vi tsina-ri ke va nau
 P: ko vasi-na ane a-tsina-ria. a-tsina-ria ko pee
 M:
 G: P say?her he A-mother-their then A-mother-their P say there
- 26 T: "para, ko reke na mo se -mi
 P: "aia, ana ka se panamae-mi 'om
 M: " ko se -mi ta naa.
 G: O.K. I F P see I to count [?] you first is {^{O.K.?}_I
- 27 T: vi nna ke se nau "kadaken, toom, dapisa,
 P: vi a-tsina-ria ko vasi "kadaken, tonua, va-topisa,
 M: "kadaken, toom, dapisa,
 G: then A-mother-their then she P count there one two three
- 28 T: tovatsi, va-ghinima, aa, gham kota-i
 P: va- vatsi, va- nima, aa, agham kota tee'e
 M: tovatsi, ghinima, gham kota te
 G: (ord)-four (ord)-five ah you all-D is
- 29 T: ka ghotsu -ma ba nna katsu nanaba.
 P: ko ve-ghotsu -mai vi ane katsu ba na.
 M: (kami) ghotsu -ma
 G: P (you) recip.-return -hither then ! it only that!

TRANSLATIONS (Numerals refer approximately to lines of original text.)

Torikina: The five of them went. (2) Their mother sent them (3) to bathe. "You will bathe, (4) then return (5) here; but (6) don't lose your little brother." (7) So they went. (8) They went and bathed. They bathed and bathed. (9) They bathed and bathed. Then their eldest brother (10) said, "get out of the water!" (11) So they got out. Then he said (12) "Let's count up first. We are only five." (13) Then the oldest counted, (14) "One, two, three, four; oh, oh! (15) the fifth one isn't here!" (16) They searched again. (17) They got back out of the water again. (18) One of them said, "O.K. I'll see if I can (19) count us." (20) He counted just like before. (22) So they went back. (23) Their mother called out to them, "How was it?" (24) "Well, one

of us, our fifth, got lost." (25) Their mother said to them, (26) "All right, I'll see if I can count you." (27) She counted out "One, two, three, (28) four, fifth; ah, you're all (29) back now." So that's all (there is to this story).

Piva: Once upon a time, the five of them went out (2) their mother sent them (3) bathing. (4) When you finish bathing, then come (5) back here, but (6) you must bring your little brother back too. (7) Then they went out. (8) Then they bathed and bathed (9) and bathed. Their eldest brother (10) said, "Let's get out of the water, you guys." (11) Then they got out. And then he said, (12) "Let's count up first. We are only five." (13) Then the eldest brother counted, (14) "One, two, three, fourth, oh, oh! (15) our fifth isn't (here)." (16) Then they looked around. (17) Then they got back out of the water. (18) "We will count ourselves again first." (19) Then he counted but it was just like before. (20) Then they just went back. (21) Their mother called out to them, "How was it?" (22) "Well, one of us got lost." (23) said one to their mother. Their mother said, (24) "O.K., I will count you now." (25) Then she said, "One, two, third (26) fourth, fifth. Well, you're all (27) back here now." And that's all (there is to this story).

Mabes: (2) Their mother sent them her children, the five of them. (3) They went to bathe. "Having finished your bathing (4) you (5) come back up here. Don't forget (6) your little brother." (7) They went down (8) to bathe. (9) Having finished their bathing, their big brother (10) said to them, "Get up (on dry land)." (11) He said, (12) "Let's count, there are only five of us." (13) Their brother started to count. (14) One, two three, four, hark! (15) It's our fifth one that's not here." They went back down (to the water) again to search. (16) "This time (17) it is I who will count us." (18) It was just like before (19) when the eldest brother counted. There were only four of them. (20) Having gone back to the village, (21) their mother asked them, "How was it?" (22) "It is one of us who got lost." (23) "It is I who will count you, O.K.?" (24) One, two, three, (25) four, five. That's all of you. (26) You have come back."

3.2. TEXTUAL COMPARISON OF SYNTAX

The purpose of this text is to highlight some of the different syntactic processes in these three varieties; hence the more or less tabular arrangement of morpheme-by-morpheme translation. A full analysis of these processes is beyond the scope of the paper. It should be quite clear that the Torokina and Piva versions generally show the same patterns. In lines 6-7, the Piva version deviates somewhat to paraphrase the /paghe-mi/ *don't* construction. I have other evidence that Piva speakers use /paghe-mi/, but I understood from the discussion at the time of translating into Piva that the speakers involved did not think that it was a good Piva expression.

There are some nominalizations in the Mabes version that do not occur in the others.

M3 /rubasa-na sisi me-gham/

M9 /rubasa-na sisi man-nari/

M22 /rabaka-ri mo ram/

These nominalized sentences are used as time adverbials. The more normal or traditional way of subjoining the clause as a time adverbial is to invert subject-verb order as in P3-4 /tsa sisiu wa-ruba' agham/. It is difficult to see that the nominalization comes from English influence, when the traditional process is closely paralleled in the archaic English subjunctive: *Had I only known*,..... I have translated the M3, M9, and M22 with gerundive approximations, e.g. M3 *Having finished their bathing*, but I am not satisfied that such approximations served as model for the Mabas syntax.

Another possibility for English influence is found in M26 /ko se-mi ta naa/. This may be a cleft structure paralleling English *The one who counts you will be me*. The problem here and in examples collected from other speakers is identifying the last two morphemes correctly. /ta/ is glossed as *is* but I am not clear on its exact function and its possible relation to future marker /ta/. /naa/ may be *I* or a tag question *O.K.?* The fact that other speakers, not familiar with English, use possibly similar structures (as in the frequent parting *Tai nau ta! go thither/fare thee well.*), argues against attributing M26 to English influence.

3.3. FURTHER LEXICAL COMPARISON

In the absence of a Rotokas translation of the text,¹ I have compiled a glossary of words used in these versions, omitting most strictly grammatical morphemes, and I have culled from VRPE the corresponding words in Rotokas. This gives us another chance for limited lexical comparison that is free from the semantic constraint of words chosen because of low probability of borrowing. Rather, it is a manageable sample of words from everyday conversation and narrative.

3.4. GLOSSARY OF TEXT WITH ROTOKAS EQUIVALENTS

Abbreviations: R = Rotokas
P = Piva
T = Torokina
M = Mabas

(Omission indicates word missing from that version.)

arrive

R: pouviro
M: rabaka

again

R: ita
T: nobe

bathe, wash

R: sisiu
P: sisiu
T: sisi
M: sisi

begin

R: rovo, rogo, pirupako
M: tanegha

big, elder

R: riro (= elder?)
 P: rooghata
 T: gari
 M: bangana

brother-your

R: araoko
 P: a-kasi-miu
 T: kasi-mi
 M: kasi-mi

children-her

R: oviirara oo
 M: na-natsu-na

count/count-us

R: vetavetasia
 P: se/vai-se-ta
 T: se/vai-se-ta
 M: se/kerui

don't-you

R: opeita
 T: paghe-mi
 M: paghe-mi

finish/cause-finish

R: opesi/opesi-pie
 P: -/va-ruba'
 M: rubasa/-

five/fifth

R: vovavae/-
 P: nima/va- nima
 T: ghinima/va-ghinima
 M: ghinima/va-ghinima

four

R: voresiura
 P: (va)vatsi
 T: tovatsi
 M: tovatsi

get

R: ou
 P: kena

get out of water

R: kosiviro (of water?)
 P: batava
 T: batava

go

R: ava
 P: nau
 T: tai
 M: tai

go back, return

R: kare
 P: gero
 T: gero

go down, descend

R: usireo
 M: ghuru

go up, ascend

R: varu
 M: toghoso

how are you?

P: gere?
 T: kave?
 M: vai vasi?

little, younger

R: kakae
 P: pasuru
 T: kikinaki
 M: kina

lose

R: kavo
 T: totom
 M: toton-na

mother-their

R: aako oaive
 P: a-tsina-ria
 T: tsina-ri
 M: tsina-ri

no, not

R: viapau
 P: ka?ana
 T: ghinava
 M: ghinava

one

R: katai
 P: kadaken
 T: kadaken
 M: kadaken

only

R: raga
 P: katsu
 T: katsu
 M: katsu

pull

R: ivu
 P: nuvu

return-hither

R: kare-vore
 P: ghotsu-gero-mai
 T: ghotsu -ma

say

R: pura, tavi
 P: pee
 T: va
 M: va

search

R: tara
 P: suku
 T: sane
 M: sane

see

R: keke
 T: reke

send-them

R: sipo
 P: tovi-ria
 T: tovi-ria
 M: tovi-ria

two

R: erao
 P: tonua
 T: toom
 M: toom

three

R: vopeva
 P: va-topisa
 T: dapisa
 M: dapisa

village

R: uruia
 M: ram

3.5. EXTENT OF INFLUENCE IN NARRATIVE VOCABULARY

The clearest shared word is *bathe* sisiu. But the Mono-Alu word *sisile* (Wheeler 1926:395) suggests that this is an Austronesian word and the borrowing is from Piva into Rotokas.

Go back kare, gero and *pull* ivu, nuvu are too different to be recent loans.

One katai, kadaken, as we have seen, may be mere chance similarity; but even if it is due to Rotokas influence, that leaves us with an unimpressive total.

3.6. CONCLUSION

Again we must conclude that there is little or no Rotokas influence on the vocabulary of either Piva or Banoni. And this time we can be firmer about the conclusion, because we have chosen words from an ordinary narrative which could be borrowed more easily.

4.0. DISCUSSION

We have now seen a small but significant sample of Banoni, Piva, and the Papuan language that was said to have influenced Piva.

This report is meant to set the record straight. It should be clear from the information presented here that Banoni and Piva are closely related languages and neither has been Papuanized to any obvious extent. That is not to say that both have been completely free from Papuan influence. Both Banoni and Piva people live next to, interact with, even marry with their non-Austronesian neighbours. All the people of south Bougainville share many cultural traits, but they also have their identifying and distinguishing traits including language.

4.1. A CASE OF PAPUANIZATION

I would like to report on one case of Papuanization in the system of kinship terms. The words for *mother* and *father* are little changed in Piva and Banoni from Proto Oceanic; but if we just consider two more terms for *aunt*, we can see Papuan influence (see Table 2).

TABLE 2: SOME PAPUAN AND AUSTRONESIAN KIN TERMS

Gloss	<i>mother</i>	<i>father</i>	<i>mother's brother's wife</i>	<i>father's sister</i>
Proto Oceanic ¹	*tina	*tama	?	?
Banoni	tsina	tama	kabo	kabo
Piva	tsina	tama	kabo	tama maunu
Fiji ²	tina	tama	gane i tama	gane i tama
Rotokas ³	aako	aite	kauo	kauo
Siwai ⁴	nuka	umoka	apu	apu
Nagovisi ⁵	ngo	mma	kabo	kabo
Nasioi ⁶	nko	mma	kaampo	kaampo

Sources: ¹Grace (1969)

²Milner (1972) [Note gane i tama *sister of father* may be vugu *in-law*.]

³Firchow, Firchow, and Akoitai (1973)

⁴Oliver (1955)

⁵Nash (1974)

⁶Ogan (1966)

We can see that the term *kabo* is probably borrowed from a Papuan language – if recently, most likely from Nagovisi. Notice that Piva appears to retain a term for *father's sister* which means more or less *female father*, which is similar to the Fijian form. We can see that these kinship terms reveal Papuanization of both Banoni and Piva – Banoni more so than Piva. We can also see from this table that Banoni and Piva have retained a basic Austronesian character in the words for *mother* and *father*. It may well be that at the Proto-Oceanic stage several thousand years ago the kinship system did not include a specific word for *aunt*.² Thus, we can see that Papuanization here may have been merely filling a gap in the Banoni and Piva lexicons rather than a more forceful replacement of a native word by a foreign word.

4.2. CONCLUSION

I wish to conclude from all of this that Papuanization is possible but that it does not happen to have played a significant role in the history of either Banoni or Piva. Certainly Rotokas has not contributed very dramatically to the Piva lexicon, even though the speakers of these languages may have been in intimate contact, e.g. in some cases married to each other.

I would like to finish by opening up the question of why there is apparently so little influence in spite of close contact.

4.3. DUAL-LINGUALISM AND PAPUANIZATION

One possible explanation may be found in the interesting phenomenon of dual-lingualism. Dual-lingualism is the form of language contact in which a speaker of language A, living in close social contact with a speaker of language B, understands language B, but does not speak B; furthermore, the speaker of B understands A, but does not speak A. Evelyn Todd (personal communication 1973) brought this possibility to my attention. Todd observed one Austronesian-speaking man from Guadalcanal living on Savo Island married to a speaker of the non-Austronesian Savosavo language. She spoke her language, he spoke his, and they learned to understand each other without speaking the other language. I observed the same kind of interaction between a Siwai man and his Banoni wife. He spoke non-Austronesian Siwai and she spoke Banoni. They could understand each other but neither spoke the other's language. In this village all the children learned Banoni. Nearly all the women speak exclusively Banoni. The men usually can speak Banoni, Siwai, and Tok Pisin fluently. Many also know one or more other languages. The point is that the Banoni learn to speak or to understand Siwai to accommodate their relatives or affines who speak Siwai. The Siwai speakers can and do get by without learning to speak Banoni. They can and do avoid speaking an incorrect or pidginized form of Banoni. Such a form of Banoni could be rich in Papuanizations, but it is avoided.

If all contact between Banoni and Piva communities and Papuan communities has been characterized by this asymmetrical pattern of language learning, it might account for the low level of Papuanization in these Austronesian languages.

5.0. APPENDIX: LEXICOSTATISTICS OF BANONI AND PIVA LISTS

The cognates noted in Table 1 yield the following percentages:

Mariga					
86	Matsunke				
77	84	(GWG)			
56	64	56	Koromaketo		
55	55	54	83	Piva	
51	52	50	61	59	Amun

We must be careful in interpreting these results. Just on the basis of these numbers one would suspect that we are dealing with three languages. However, there are two reasons to include Amun within the Piva language. First, in a significant number of comparisons there are two sets of cognates across the lists. Of these, eleven split evenly between the first three and the second three lists. Second, and more important, are the grammatical similarities. Amun and Piva appear to share the tense/aspect system in detail. Also in both, the nouns are marked by articles /a/ and /e/, which correspond roughly to 'human'-v.-'non-human animate' categories. This is in contrast to the Banoni system, where these singular articles are lost except in certain environments. (The plural forms /na/ and /ne/ are retained in both languages.)

There is further reason to be cautious in using lexicostatistics. The highest percentage is between Mariga and Matsunke; but there are two phonetic changes uniting the inland villages of Mariga and Mabas and distinguishing them from Matsunke, Torokina, and the home of Grace's informant.

(1) In Mabas area [a] is fronted to [æ] next to syllables with front vowels. This is quite obvious in the common word of negation:

Torokina	[yinawa]	no
Mabas	[yinæβæ]	no

(2) In Mabas area /s/ is realized as [h] in a few words — all of them question words:

Torokina	[soa]	[sua]	what;	[ʃe:]	who
Mabas	[hoa]		what;	[he:]	who

The lexical comparisons and cautions noted here lead to the conclusion that Banoni and Piva are closely related languages and that each has two major varieties. Banoni is known to its speakers as Tsunari. The inland variety spoken in Mabas, Mariga, and a few more villages is known as Tsunari Gore. Piva speakers call their language Ravunuia. They know the village of Amun as Buruve and use this name to refer to the speech of that village.

NOTES ADDED IN PROOF

A number of relevant sources have become more available since the submission of this manuscript:

See Laycock (1973) for a similar account of language contact in the Sepik area with a similar lack of Papuanization or Pidginization.

See Lincoln (1976) for more details of Banoni grammar.

See Lincoln (1975b) for some elaboration of the concept of dual-lingualism.

Finally note that in the story of the five children that although /kasi/ *sibling of the same sex* was translated as *brother* there is no marker in any of the three versions indicating the actual sex of the children. Languages of the Bougainville Super-Stock overtly mark the sex of some third person pronominal references making the sexual ambiguity of the Banoni versions impossible.

N O T E S

1. There are some beautifully prepared texts available in Rotokas by Firchow and Akoitai (1974a,b,c), but these are intended more for Rotokas readers than grammatical study.
2. Either in the sense of *Fa Si* or *Mo Br Wi*, *tina probably included *Mo Si* and *Fa Br Wi*.

BIBLIOGRAPHY

ALLEN, Jerry and Conrad HURD

- 1965 *Languages of the Bougainville District*. Port Moresby:
Department of Information and Extension Services.

CAPELL, Arthur

- 1962 *A Linguistic Survey of the South-western Pacific*. New
and Rev. Ed. Technical Paper No. 136. Noumea, New
Caledonia: South Pacific Commission.

FIRCHOW, Irwin and David AKOITAI eds

- 1974a *Rotokas Reo Vo Sipoosiporoaro* (stories). Ukarumpa:
Summer Institute of Linguistics.
- 1974b *Rotokas Reo Vo Kokovaero* (songs). Ukarumpa: Summer
Institute of Linguistics.
- 1974c *Rotokasipa Irara Vo Pitupituroaro* (customs). Ukarumpa:
Summer Institute of Linguistics.

FIRCHOW, Irwin, Jacqueline FIRCHOW, and David AKOITAI

- 1973 *Vocabulary of Rotokas, Pidgin, and English*. Ukarumpa:
Summer Institute of Linguistics.

FIRCHOW, Irwin and Jacqueline FIRCHOW

- 1969 'An Abbreviated Phoneme Inventory'. - *Anthropological
Linguistics* 11/9:271-6.

FRANKLIN, Karl J., Harland B. KERR, and Clive H. BEAUMONT

- 1974 *Tolai Language Course*. 3rd Ed. Language Data Asian-
Pacific Series No. 7. Ukarumpa: Summer Institute of
Linguistics.

GRACE, George W.

- 1969 'A Proto-Oceanic Finder List'. *University of Hawaii Working Papers in Linguistics* 2/3:39-84.

HOOLEY, Bruce A.

- 1971 'Austronesian Languages of the Morobe District, Papua New Guinea'. *Oceanic Linguistics* 10/2:79-151.

LAYCOCK, D.C.

- 1970 'Eliciting Basic Vocabulary in New Guinea'. In: Wurm and Laycock, eds *Pacific Linguistic Studies in Honour of Arthur Capell*. PL, C13:1127-77.
- 1973 'Sissano, Warapu and Melanesian Pidginization'. *Oceanic Linguistics* 12:245-77.

LINCOLN, Peter C.

- 1975a *Suggestions for Banoni Orthography*. Workpapers in Papua New Guinea Languages. Ukarumpa: Summer Institute of Linguistics.
- 1975b 'Acknowledging Dual-lingualism'. *University of Hawaii Working Papers in Linguistics* 7/4:39-45.
- 1976 Describing Banoni, an Austronesian Language of Southwest Bougainville. Ph.D. dissertation, University of Hawaii.

MILNER, G.B.

- 1972 *Fijian Grammar*. Suva: Government Press.

NASH, Jill

- 1974 *Matriliney and Modernization: The Nagovisi of South Bougainville*. New Guinea Research Bulletin 55. The Australian National University: New Guinea Research Unit.

OGAN, Eugene

- 1966 'Nasioi Marriage: An Essay in Model-building'. *Southwestern Journal of Anthropology* 22/2.

OLIVER, Douglas L.

- 1949 'Studies in the Anthropology of Bougainville, Solomon Islands'. *Papers of the Peabody Museum of American Archaeology and Ethnology* 29, Harvard University.

- 1955 *A Solomon Island Society: Kinship and Leadership among the Siuai of Bougainville.* Cambridge, Massachusetts: Harvard University Press.

